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CLOTHING AS AN INVESTMENT IN HUMAN CAPITAL

BY

© SHEILA SINNOTT

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF SCIENCE

IN

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It is only shallow people who do not judge by appearances. The true mystery of the world is the visible, not the invisible.

Oscar Wilde

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled CLOTHING AS AN INVESTMENT IN HUMAN CAPITAL submitted by SHEILA SINNOTT in partial fulfillment of the requirements for the degree of MASTER OF SCIENCE in CLOTHING AND TEXTILES.

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ABSTRACT

Clothing as an Investment in Human Capital

by

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University of Alberta, 1985

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The purpose of this study was to certify the existence of an investment component in clothing expenditure. The job interview situation was chosen on the assumption that if an individual's clothing affects the decisions of the interviewer, then the expenditure on clothing must be accepted as investment.

A volunteer sample of 60 students, alumni and non-academic staff from the University of Alberta submitted to mock job interviews. The interviews and rankings of the respondents were done by twelve professional interviewers from the business community. Various behavioral, performance and appearance attributes were scored independently by a hidden viewer and listener. Rosenberg's Self-Concept Scale and Body Cathexis Scale were also administered to the respondents.

The scores of the interviewers were significantly correlated to the scores of the viewers, but no correlation was found between the scores of the interviewers and the scores of the listeners. This

seemed to suggest the interviewers were influenced more by visual stimuli than by verbal communication.

Regression analyses were performed to determine the attributes of the respondents that best explained the rankings of the candidates by the interviewers. Appropriateness of dress, appropriateness of clothing and formality of dress of the respondents were found to be significant in explaining variation in decision to hire. Other attributes which were significant in predicting the respondents' rank were years of employment experience, education level, grade point average, communication ability, race, body structure, and self-esteem of the respondent. Discriminant analysis with these variables predicted group membership with 91.7% accuracy for those most likely to be hired and 100% accuracy for those least likely to be hired. It was concluded from this preliminary study that an investment aspect of clothing is indicated and that future research is warranted.

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It is with gratitude and affection that I extend thanks to my friends and fellow graduate students. Diane Blenkarn, Jean Poscente, Alison Drohan, Joanne Sheils and Melissa Rafter provided friendship, support and assistance during the period of this project.

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I. INTRODUCTION

Investment dressing seems to be the catch phrase of the decade. This concept has stressed the purchase of fewer, better quality, classic articles of clothing which will give greater longevity and versatility to the wardrobe. 'Cost per wearing' is used as the justification for this type of clothing purchase; career clothing is marketed using this investment aspect. The use of the term investment in these instances is inaccurate and misleading. A more accurate terminology would be 'budget dressing', as investment implies some monetary return to the investor, yet this return is not inherent in the term 'investment dressing' as it is commonly used. An individual invests in real estate or in a business venture with the expectation of some financial gain. Consumers 'invest' in classic quality garments with the expectation of reducing their long-term clothing expense.

There may be a true investment component in clothing. The individual may purchase specific articles of clothing with the expectation of accruing some financial return. The major stumbling block to serious consideration of the investment aspect of clothing is the commonly held view that clothing norms are inherently trivial, as summarized by Hart:

> . . . the rules of . . . dress . . . occupy a relatively low place in the scale of serious importance. They may be tiresome to follow, but they do not demand great sacrifice: no great pressure is exerted to obtain conformity and no great alterations in other areas of social life would follow if they were not observed or [were] changed. (Hart, 1961, p. 169)

Clothing professionals should be alarmed by this suggestion, recognizing that the consequences of non-conformity in dress are often great. Loss of employment, arrest, harassment and expulsion or suspension from school resulting from such non-conformity have all been documented (Whisner, 1982). Whisner points out that:

> By regulating clothing, employers, schools and government agencies . . . deem appearance important. The fact that these provisions are challenged . . . suggest that those regulated do as well. (Whisner, 1982, p. 73)

It is suggested that the individual must conform to some standard of dress when seeking employment. Attention must be given to the vast amount of periodical and popular press material advising job-hubters how to dress in order to achieve success at interviews. A substantial body of literature has been published over the past decade, both in magazine articles and in book form. It is believed that this popular press material has set the dress standard for the white collar job applicant. The researcher believes that this dress code is so widely accepted that an individual must adopt this mode of dress to remain at parity with other applicants, at least as far as professional or white collar employment situations are concerned. This does not, however, suggest that appearance and dress are unimportant in blue collar or rural employment situations. It is believed that there are expectations of dress behavior in these job types as well but that they are different from those of white collar applicants. If dressing in a non-conforming manner prohibits entry into the work force, and so inhibits the individual's ability to earn a living, can dress rules be considered trivial?

A. Purpose of the Study

This study aims to establish that clothing has an investment component, rather than being solely consumption. If a mode of dress enhances the capabilities of an individual to achieve some return, then the expenditure on dress must be accepted as investment. This study, therefore, will expand the theory of human capital and will interest economists working in the area of human resource development.

The establishment of clothing as a human investment will advance the theoretical base of Clothing and Textiles. The information gained in this study should establish the importance of dress relative to other factors operating in a job interview situation. Also, as this study deals with the interview situation, the findings should be of interest to organizational development specialists, particularly those who deal with personnel selection. Finally, the findings of this study should affect the study of consumerism. If the investment component of clothing expenditure is established, then the traditional view of clothing as pure consumption will be affected, thus adding a new dimension to research on the clothing consumer.

B. Statement of the Problem

For an expenditure to be considered a human investment, it must be demonstrated that this expenditure enhances the capabilities of the individual to produce income (Schultz, 1971a). If the dress of an applicant at a job interview, when related to the other attributes of the applicant, is found to be significant in the decision to hire, then the investment aspect of clothing in this specific situation will be

indicated. The question, therefore, to be addressed is: What is the importance of an interviewee's clothing relative to other employment related attributes, to that individual's success in a job interview situation?

C. Justification

A substantial body of research indicates the importance of appearance or dress in the formation of first impressions, such as is the case in a job interview situation. Previous research has not, however, established the importance of dress relative to the other attributes of the job applicant, such as education, work experience and communication ability. If the apparel worn to an interview can be established as enhancing the capability of job applicants in obtaining employment, then an investment aspect of clothing may be established.

It is particularly appropriate for this research to be conducted by the Department of Clothing and Textiles as professionals in this discipline are expected to assess the claims made by popular press authors, whose motives for writing such advice may not be purely altruistic. The profession has the responsibility to examine the claims made and ascertain the validity of such advice.

D. Objectives

This study has eight objectives:

1. To establish a relationship, through empirical methods, between the appearance of job applicants participating in an interview situation and success in the interview as measured by the interviewer.

2. To interpret this relationship, and to draw implications from it as to the importance of appearance for the job applicant.
3. To establish a relationship, through empirical methods, between the dress of job applicants participating in an interview situation and success in the interview, as measured by the interviewer.
4. To interpret this relationship and draw implications from it as to the importance of dress for the job applicant.
5. To establish a relationship, through empirical methods, between the clothing of job applicants participating in an interview situation and success in the interview, as measured by the interviewer.
6. To interpret this relationship and draw implications from it as to the importance of clothing for the job applicant.
7. To establish the ranking of personal characteristics of the job applicants which affect the decision to hire.
8. To identify any personal characteristic or combination of characteristics which will predict success or failure in a job interview situation.

E. Hypotheses

Based on the objectives stated previously, the following null hypotheses are to be tested.

1. There is no significant relationship between success in the job interview and the appearance of the job applicant.
2. There is no significant relationship between success in the job interview and the dress of the job applicant.

3. There is no significant relationship between success in the job interview and the clothing of the job applicant.
4. There is no significant relationship between success in an interview and characteristics of the applicant considered discriminatory under the terms of the Individual's Rights Protection Act. These are:
    a) Age
    b) Sex
    c) Physical Characteristics
    d) Place of Origin
    e) Social Class (ancestry)
    f) Accent (ancestry)
    g) Race
5. There is no significant relationship between success in an interview and variables which measure the applicant's feelings about his/her physical self. The measure to be used is Body Boundary.
6. There is no significant relationship between success in an interview and specific characteristics of the applicant's dress. These are:
    a) Fit of applicant's clothes
    b) Condition of applicant's clothes
    c) Apparent cost of applicant's clothes
    d) Fashionability of applicant's clothes
    e) Grooming of applicant
    f) Formality of applicant's clothes

7. No combination of attributes contribute significantly to the ranking of the job applicants.

F. Operational Definitions

For the purposes of this study, the major variables were operationally defined as follows:

Clothing: "Wearing-apparel./ Garments" (Oxford Concise Dictionary, 1964). Operational definition - The visible garments worn by the applicant into the interviews. The score for this variable was obtained from a viewer's rating of this specific aspect as defined. The possible scores ranged from 0 (least appropriate) to 10 (most appropriate). No specific guidelines were provided to the viewer as to appropriateness, but relied on the viewer's interpretation of the norms commonly operating in an interview situation.

Dress: "Includes more than merely covering the body with apparel. Dress includes coiffure, cosmetics, jewellry and accessories carried by and for the individual" (Eicher, 1981, p. 36). Operational definition - The visible garments, coiffure, makeup, jewellry, shoes, handbag or attache case worn or carried by the applicant into the interview. The score for this variable was obtained from a viewer's rating of this specific aspect as defined. The possible scores ranged from 0 (least appropriate) to 10 (most appropriate). No specific guidelines were provided to the viewer as to appropriateness, but relied on the viewer's interpretation of the norms commonly operating in an interview situation.

Appearance: ". . . communicated by such non-verbal symbols as gestures, grooming, clothing, location and the like" (Stone, 1965, p. 220). Operational definition - The visible garments, coiffure, makeup, jewellry, shoes, handbag or attache case worn or carried by the applicant into the interview plus grooming, body language and mannerisms apparent at the interview. The score for this variable was obtained from a viewer's rating of this specific aspect as defined. The possible scores ranged from 0 (least appropriate) to 10 (most appropriate). No specific guidelines were provided to the viewer as to appropriateness, but relied on the viewer's interpretation of the norms commonly operating in an interview situation.

Age: Operational definition - Calculated from the date of birth provided by the volunteer on the resume.

Sex: Operational definition - Provided by the volunteer on the resume.

Physical Characteristics: Operational definition - The body stature of the volunteer calculated from the height and weight data provided by the volunteer on the resume.

Place of Origin: Operational definition - The geographic location provided by the volunteer on the resume where he/she lived for the majority of his/her life before sixteen years of age.

Social Class: Operational definition - calculated using Hollingshead's (1957) Two-Factor Index of Social Position from the information supplied by the volunteer on the resume as to the occupation and education level of the head of the volunteer's household. The range possible was from 1 (upper class) to 5 (lower class).

Accent: Operational definition - The score for this variable was obtained from a listener who noted the presence of a discernible speech pattern other than a Canadian accent. The score for this variable was either 0 (Canadian accent) or 1 (presence of other type of accent).

Race: Operational definition - The score for this variable was obtained from a viewer. The possible score ranged from 0 (perceived as non-caucasian) to 1 (perceived as caucasian).

Body Boundary (Barrier) Index: An index of the "body as experienced" and is believed to be associated with feelings towards one's body. Operational definition - As measured by the first twenty-five cards of the Holtzman Inkblot Techniques, Form A and scored by Dr. Seymour Fisher.

Fit: Operational definition - The score for this variable was obtained from a viewer's rating of the sizing of the volunteer's clothes. The possible scores ranged from 0 (very poor fit) to 10 (excellent fit). No specific guidelines were provided to the viewer as to criteria but relied on the viewer's interpretation of the norms commonly operating in garment selection.

Condition: Operational definition - The score for this variable was obtained from a viewer's rating of the cleanliness, repair and press of the volunteer's clothes. The possible scores ranged from 0 (poor condition) to 10 (excellent condition).

Apparent Cost: Operational definition - The score for this variable was obtained from the viewer's perception of the monetary value of

the volunteer's clothes. The possible range was from 0 (very inexpensive) to 10 (very expensive).

Fashionability: Operational definition - The score for this variable was obtained from the viewer's perception of the trendiness of the volunteer's clothes. The possible range was from 0 (extremely unfashionable) to 10 (extremely high fashion).

Grooming: Operational definition - The score for this variable was obtained from the viewer's perception of the personal hygiene of the volunteer. The possible range was 0 (extremely messy, dirty) to 10 (extremely neat, clean).

Formality: Attempts to measure the minimum acceptable level of formality of dress acceptable in an interview situation of the formal-casual continuum. Operational definition - This variable was calculated from the viewer's notation of the garments worn by the volunteer. A female volunteer wearing a skirted garment was scored as 1, if wearing a bifurcated garment, the score assigned was 2. A male volunteer wearing a tie was scored as 1, if not wearing a tie, the score assigned was 2.

G. Delimitations

This study will consider only the information given by the job applicant voluntarily, either visually, verbally, or in written form. The educational and work history information from the resume, information the applicant supplies verbally during the interview, and information collected visually by the Interviewer, therefore, are the only factors to be considered by the Interviewer in scoring and ranking

applicants. Data from the viewer's evaluation, the listener's evaluation, as well as the demographic data given to the researcher were not available to the Interviewer for scoring and ranking, but were added to the applicant's file for further analysis. No checks were made as to the verity of the information voluntarily supplied.

H. Limitations

This study is limited by the use of a sample of volunteers seeking diagnostic feedback on their interview technique and therefore generalization to other job applicants, other interviewers, or other interview situations cannot be inferred from this study. This study is also constrained by both the interviewer and applicants' knowledge that this is a practice situation and there is no real employment outcome possible.

I. Assumptions

The following assumptions were basic to the study:

1. The information supplied by the job applicants was given honestly.
2. The interviewers conducted the interviews and ratings of the applicants in a manner consistent to a real job interview.
3. Rankings of the candidates were rational.
4. Scoring of the clothing and dress of the applicants by the viewer were rational.
5. Job applicants gave as much care to their dress as they would in a real job interview situation.

II. REVIEW OF LITERATURE

A. The Effect of Appearance and Clothing in the Formation of First Impressions

First impressions are particularly important in the job interview. Because of the relative brevity of interviews, the decision to hire is heavily influenced by the interviewer's perception of the job applicant (Nordberg, 1984). Some perceptions of the applicant are formed even before the interview takes place, based on the information gleaned from the application form and the resume (Hegedus, 1984). It is possible, however, that the interview may change these initial impressions.

Stone (1965) maintains that every social transaction must be broken down into at least two analytic components or processes - appearance and discourse. He states that appearance is at least as important for the establishment and maintenance of self as is discourse. Stone believes that appearance is the phase of social transaction which establishes the identification of the participants through gestures, grooming and clothing. Of specific importance to the interview situation is his conjecture that appearance establishes the aspects of the person - that he has acted, is acting and will act further. On the basis of appearance, the interviewer may anticipate the attitudes and future behavior of the applicant.

Age and sex are the first judgments made of strangers and are also likely to be the most accurate (Horn and Gurel, 1981). Clothing is an important cue in forming impressions of other persons and is

particularly significant when contact with others is limited (Rosencranz, 1962; Douty, 1963; Hamid, 1969; Eicher, 1981; Forsythe, 1982).

Researchers have isolated various personal traits which viewers have assumed from appearance. Clothing was found to affect impressions of status (Douty, 1963; Rosencraz, 1962; Hoult, 1954; Molloy, 1981). Ray (1958) found appearance affected judgment of intelligence. Dion, Berscheid and Walster (1972) found that attractive people were rated as having more desirable personality traits and were believed to be personally more successful. Landy and Sigall (1972) found that as the attractiveness of a writer increased, so did the perceived quality of her writing. Judgments of social and political attitudes of people in photographs were studied in research by Buckley and Roach (1974). Conner, Peters and Nagawasa (1975) suggest that costume has a greater effect on social impression than does person. Douty (1963) states, albeit cautiously, that first impressions of persons show some tendency to be related to costume impressions. Eicher (1982) views dress as a communication device and that dressing the self results in communicating information about oneself to others. Forsythe (1982) affirms that clothing is a significant part of the perceptual field within which one is located and affects how one is perceived by others. Judd and Bull (1975) found that dress of survey givers influenced the willingness of people to answer the questionnaire. The significance of appearance, and its sub-components dress and clothing, would seem to be well established, particularly when the perceived person is a stranger to viewers.

Perceptions of people are not necessarily accurate. Conner, Peters and Nagasawa (1975) point out that first impressions vary in accuracy but more importantly even when additional data are acquired, people tend to maintain and extend their initial impressions. Inferences made from clothing cues depend particularly on one's level or mode of perception. The extent to which an individual uses clothing symbols in forming impressions of others depends on the relevance of cloting stimuli to the perceiver (Horn and Gurel, 1981). Rosencranz (1962) indicates that clothing awareness increases as social class, education and income increases. This would seem to suggest that the higher the socio-economic status of the interviewer, the more importance will be placed on the clothing of the job applicant. If clothing stimuli is of relevance to the interviewer, the applicant's dress may have particular bearing on the interviewer's judgments of the future performance of the applicant, if Stone's (1965) assertion, that future behavior (performance) can be judged from appearance, is adopted.

B. Clothing as Non-Verbal Communication

Several theories have been advanced to explain the function of dress within our society. The Adornment or Decoration Theory is the most widely accepted (Horn and Gurel, 1981). Several studies have indicated the relatively high value that aesthetic factors play in clothing selection (Barr, 1935; Hoult, 1954; Lapitsky, 1961). Style and fashion seem to overshadow the functional aspects of clothing as our environment becomes more controlled. Polhemus and Proctor (1978) have proposed the concept of anti-fashion, which has particular

application to business dress. A segment of the larger society chooses a mode of dress acceptable to their particular group. Although there is some degree of flexibility within the chosen mode, there are definite boundaries which if over-stepped, are not sanctioned. For example, business women cannot be too trendy, too sexy, too sporty, too feminine or too masculine. Their clothing must appear to be of natural fibres as synthetics are not recommended (Molloy, 1977; Halcomb, 1979; Coffey, 1979; Mitchell and Burdick, 1983; Bixler, 1984). There are also constraints on the colours and garment styles. Avoidance of extremes summarizes the accepted dress standard. This is not to suggest, however, that this dress is static - indeed, the business woman must maintain relative distance between how she dresses and high fashion. For, if she does not, and the distance widens, she will risk being considered too dowdy - and that lower boundary cannot be crossed either.

The Adornment Theory can be divided into several sub-categories: sexual attraction, trophyism, terrorism, totemism, extension of self, and identification. Although applications could be found to business dress in each sub-group, only the last two will be discussed. Dress serves to identify and distinguish people in many ways. Thourlby (1981) states that 90 percent of the first impression is based on the clothing of the perceived individual. He says the viewer makes ten decisions when forming this impression. These concern economic level, educational level, trustworthiness, social position, level of sophistication, social heritage, educational heritage, economic heritage, successfulness and moral character.

Clothing as a means of identifying the economic, social or prestige strata to which an individual belongs is accepted (Horn and Gurel, 1981; Veblen, 1899). Several empirical studies have confirmed that clothing can function as an important class symbol in status rating, particularly for strangers (Hoult, 1954; Rosencranz, 1962). The importance of this perception of social class from clothing cues is the basis of the assertions made by Molloy (1981). He states that if the individual wishes to enter executive or professional positions, then the individual must have the clothing and the mannerisms of the upper socio-economic class. This assertion would seem to be supported by the study done by Donovan (1961) in which he documented the socio-economic backgrounds of executives (upper management) and low managers in four large multi-plant corporations. The executives came from upper socio-economic backgrounds, the middle management employees had working or middle-class backgrounds. There was little cross-over - that is, few employees with high socio-economic background were working at the lower level and few executives came from a middle or lower-class background.

The results of studies on the importance of clothing in determining the social class of strangers (Hoult, 1954; Rosencranz, 1962), as is the case in job interviews, combined with the studies of Molloy (1981) and Donovan (1961) would seem to suggest that the perceived socio-economic status of a job applicant is reflected by his/her appearance and is of importance in the interview process.

Clothing may be used to designate occupation (Horn and Gurel, 1981). Although this function is most often associated with

standardized uniforms, occupational identification is possible even when a uniform, in its strictest definition, is not worn. The adoption of career apparel, or the institution of dress codes, by some employers results in a distinguishable company image. In the case of business dressing, some latitude is noted between industries (Cho, 1982; Peacock, 1984; Molloy, 1977). Although employees are advised to keep their clothing within certain boundaries, an employee in middle-management in the advertising industry may dress differently than an employee at a similar level in banking. Rogers (1982) found that there were differences in clothing deemed appropriate by profession. Dillon (1980) unfortunately did not analyze the data collected from fifteen companies or industries on appropriate business dress for women.

In group membership, clothing becomes part of the identification process; women who adopt business dress may be seeking to affiliate with an informal group. Women in management dress differently than women in secretarial positions within the same organization. It may be possible that female business dress, centered heavily on the tailored skirted suit, seeks to identify with the traditional male business suit (Molloy, 1977).

The sub-category of the adornment theory which has received the least attention, relative to business dress, is the Extension of the Self. This theory proposes that the conscious existence of the self takes on the characteristics of the clothing worn, thereby giving the wearer an increased sense of rigidity, size or power. Solomon (1981) states that clothing serves as a buffer which will assume a large degree of responsibility for transmitting to others the information

one wishes to convey. If an individual wears a power outfit, then the individual's personal power is amplified. If the individual is not a powerful or dynamic person, then the power outfit may serve a remedial or supplementary role. This would seem to be supported by the work of Kernaleguen and Compton (1968) which indicated that individuals with low body boundary (barrier) took compensatory clothing behavior to strengthen their body image. Fisher and Cleveland (1968) predict that individuals with definite body boundary (high barrier) will be more active, independent, autonomous and more communicative.

Wearing a power outfit may also act as a cueing mechanism - it reminds the individual how he is supposed to behave in certain situations (Solomon, 1981; Fisher, 1973). In this way, clothing has the potential to influence, guide, or alter the wearer's behavior. This is a contradiction to the belief that mood determines clothing choice - rather, clothing choice may determine behavior (i.e. mood).

C. Selection Devices Used in the Decision to Hire

A selection device is an instrument used by employers or interviewers to gain information about the individuals who apply for employment. Some devices, such as interviews and application forms, are used almost universally. Other devices, such as polygraphs or graphology, enjoy little popularity. Whatever device or combination of devices are used, the employer must be concerned with two features of these devices.

The first concern should be in regard to the reliability of the instrument. The device, to be effective, must be consistent in three

dimensions. The primary consistency must be internal reliability. The secondary consistency must be inter-rater. That is, the device must be consistent from interviewer to interviewer. The third measure of reliability must be inter-time, that is the instrument must be consistent whenever it is used. For example, there should be no difference between an early morning interview and one held in the late afternoon.

The second concern about a selection device is its validity. The instrument must measure the intended aspect of the job for which it is designed.

Summarized in Table 1 are some selection devices in use with the employment levels for which they are recommended and a notation for the actual uses.

The value of devices which relates biographical data, such as the application form or resume, is based on the premise that past behavior is the best predictor of future behavior. The data relayed by this type of device to be used in decision making should be verifiable, factual, specific, and historical.

The interview, as can be seen from Table 1, is the most widely used device for applicant selection. The main value of the interview is in the two-way communication it engenders. The interview can be

Table 1

Common Selection Devices and Recommendations for Use

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Note. From Human Resource Management Workbook. By D.M. Hegedus, 1984. Edmonton: Faculty of Business, University of Alberta. Copyright 1983 by D.M. Hegedus.

useful in evaluating the interpersonal skills and motivation of the applicant. However, the interview as a selection device has a low rating in both reliability and validity (Hegedus, 1984).

Research findings about the interviews as a selection device are summarized by Hegedus (1984) as follows:

1. Prior information (from resume, etc.) biases judgment.
2. Order of applicants affects the judgment and memory of the interviewer.
3. Contrast effects - a candidate following a very good candidate will look poor in comparison.
4. Negative information is given much more weight.
5. Interviewers forget much of the content within minutes of the end of the interview.
6. The interviewer makes the decision in the first 4 or 5 minutes.
7. Interviewers hold stereotypes of a "good" candidate and this is usually not based on job-related features.
8. Interviewers favor those similar to themselves in attitude, sex, race, etc.

Carol Cox, Senior Vice-President for Human Resources and Communication at Frederick Atkins, Inc. says that the interviewer forms 90% of his opinion in the first five minutes and then spends the rest of the interview trying to see if he is right (Nordberg, 1984). Nordberg (1984) assures the interviewers that they wil inevitably and instantly make a judgment based solely on appearance and manner. She advises the interviewer to trust this first instinct - that first impressions can be wrong, but they are usually right. She does

suggest, however, that appearance is more important at the lower rather than the higher levels of employment. Some leeway is allowed to candidates who are interviewing for positions requiring creativity. Nordberg (1984) freely admits that appearance and dress enter into decision to hire; while Hegedas (1984) alludes that this may possibly be the case.

There are two main models which depict the selection process. The sequential elimination (Figure 1), known also as the discrete model, or the multiple hurdles model, eliminates candidates sequentially until only the best candidate is left.

Figure 1

Discrete or "Multiple Hurdles" or Sequential Elimination Model

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The Comprehensive Model (Figure 2) considers all candidates on all devices at once.

Figure 2

Simultaneous Elimination Model

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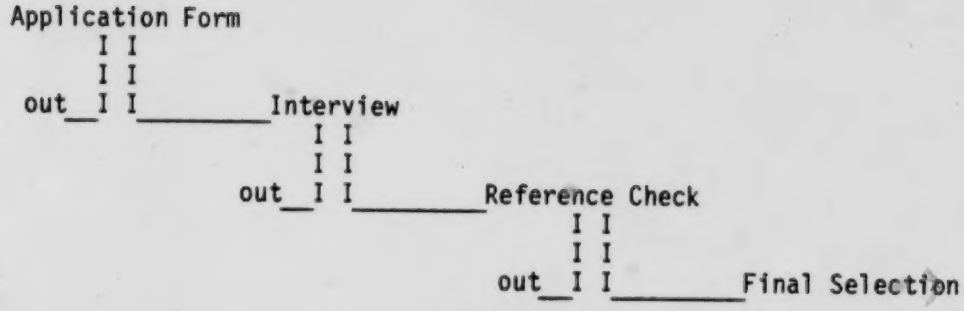
In this model, the best candidate is chosen from the pool of applicants. Variations of these models are also used. Figure 3 depicts the model used by the Government of Alberta

Figure 3

Government of Alberta Elimination Model



In the Alberta system application forms are reviewed by clerical staff. Those applicants who do not meet the basic requirements of position are eliminated. The remaining applicants are interviewed by a board usually consisting of a personnel officer and two professionals from the employing branch. The interviewees are asked several questions related to specific knowledge requirements of the job. If the candidate performs adequately, she will be certified and if more than one candidate is certified, they will be ranked. The first-ranked candidate's references will then be checked, and if adequate, the job offer will be made.

It would seem evident that the success at the interview depends heavily on the first impression made by the applicant. That non-verbal communication strongly influences that first impression is indicated.

D. Dress and Employment

Considerable advice is offered in the popular press to individuals regarding business dress. With few exceptions, the advice from various sources tends to agree. The most widely cited author advising on business dress is John Molloy (1975; 1977). The reason for his popularity is somewhat unclear. Molloy's advice on business dressing is not substantially different from that of previous writers. It is more detailed than previous work, and does suggest specific colour which propound to make the wearer either authoritative, popular, believable, or to create a presence. Molloy also states very specifically the type of clothing which should or should not be worn. Perhaps the lack of ambiguity which leaves little to interpretation is the reason for high acceptance.

The role of dress in employment, particularly in the interview situation, has not been totally ignored by researchers. A rather large study (Blouin, Summers, Kelley, Glee, Sweat and Arledge, 1982) used a Likert Statement instrument on students and campus recruiters to ascertain their views on career appearance. Respondents recognized appearance as a component of performance evaluation and as an influence on an individual's effectiveness. Generally, extreme styles of dress are deemed unacceptable.

DeLong, Salusso-Deonier and Larntz (1983) studied the differences in response by male and female respondents to social and business female dress. They concluded that females accepted the business image represented, while the male response was more diverse.

Forsyth and Drake (1981) found that clothing of women job applicants had a positive significant influence on the perception of desired management characteristics and concluded that female applicants should select clothing with a high degree of Yangness (masculinity) in order to best convey desired management characteristics. A follow-up study by Forsyth (1982) confirmed and strengthened the original study, leading her to conclude that a female applicant's mode of dress does provide an avenue to maximize the favorability of the hiring recommendations she receives.

Rucker, Taber and Harrison (1981) presented subjects with a drawn female figure in twelve different outfits and asked for the impressions they would make in a job interview situation. Form-fitting outfits (tailored) were rated more favorably than loose outfits, and multi-layered (i.e. with a jacket) outfits favored over non-layered. High necklines were seen as more appropriate. Coffey (1979) performed a similar study using photographs of the same model dressed in five different outfits. These photographs were shown to personnel directors from diverse business firms across the United States. The opinions were consistent. The skirted suit was the first choice, followed by the dress. The tailored pant suit, the most Yang (masculine) of the costumes, was the most negatively received. The second most Yang costume, however, was the skirted suit, the unanimous first choice.

Cash and Janda (1984) report that female job applicants who are attractive, who look too feminine, are at a distinct disadvantage when applying for management or traditional male positions. Personal attractiveness is never a handicap for male applicants. They conclude,

sadly, that their research suggests that the advice given by the popular press on business dress is sound. To succeed in business, a woman must cut her hair short, use cosmetics sparingly, and wear conservative suits.

E. Investment in Human Capital

In the 1960s and early 1970s, economists devoted a great deal of effort towards developing and quantifying the concept of "human capital" and towards applying it, through the concept of investment in the formation of human capital, to such activities as education and training (Miller, 1960; Huffman, 1974), human migration (Bödenhofer, 1967), and medical care (Mushkin, 1962). These economists asserted that expenditures on individuals which lead to increases in future productivity are investments in capital and that it is useful to treat them in both theory and practice as capital formation.

Schultz (1971a) states that much of what we call consumption constitutes investment in human capital. Direct expenditures on education, health and internal migration to take advantage of better job opportunities are clear examples. A simplistic approach classifying an expenditure as human investment is to ascertain if Revenue Canada allows the expenditure as a deduction from taxable income. If they do, it is definitely an investment. If they don't, it still could be. For example, earnings forgone by mature students attending school, and by workers acquiring on-the-job training are equally clear examples of investment. Yet, nowhere do these enter into our national accounts. The use of leisure time to improve skills and knowledge is widespread

and it too is unrecorded. In these and similar ways the quality of human effort can be greatly improved and its productivity enhanced. Schultz (1971b) contends that such an investment in human capital accounts for most of the rise in real earnings per worker.

It must not be assumed, however, that investment in human capital has received unanimous acceptance among economists. Schultz (1971a) believes that for some, looking on human beings as capital goods is offensive. The implication of slavery is seen as abhorrent. The human capital concept seems, to some, to reduce the individual to a mere material component and so debase him.

Schaffer (1971), an opponent of human investment, cites three reasons for the inadvisability of the application of the capital concept to human beings. First, he believes that any direct expenditure on the improvement of man is taken for reasons other than expectation of monetary gain and that consumption expenditures are inseparable from pure investment.

Schaffer's second reason for opposition is that even if it were possible to separate consumption expenditure from investment, it would still be impossible to allocate a specific return to a specific investment.

His final argument is that even if separation of consumption expenditure and investment were possible and if allocation of return to investment could be accomplished, it would still be ill-advised to utilize the information as a base for policy formation.

Schaffer's main warning is that if one decided to include everything that tends to increase man's productivity, the overwhelming

part of all expenditures to which we usually refer to as consumption expenditures would have to be considered investments, including clothing (Schaffer, 1971, p. 32). This, he asserts, would create more problems than it would solve, although he neglects to identify these potential problem areas.

The purpose of this paper is not to consider the policy implications of reclassifying traditional consumption expenditures as investment. Rather, it is to adapt the concept of human investment to the level of the individual. If certain expenditures can enhance the individual's ability to improve his capability to earn income or to be more productive, then the human capital concept is worthwhile. Because this study is being conducted within the discipline of Clothing and Textiles, only expenditures which affect appearance, dress, or clothing are of interest.

For a lawyer to appear before the Court of Queen's Bench, she must wear the prescribed robe, vest, and collar. It would seem then, that the expenditure on such regalia is necessary to earn her fees as a barrister, and must therefore be considered an investment. In the job interview situation, if a woman must wear a tailored, skirted suit to improve her chances of being hired, then at least some part of the expenditure is an investment. Her education expenditure undoubtedly also contributed to her chances of success, but if the interviewer's decision is influenced by her appearance to a significant degree, then clothing expenditure for this specific instance was an investment. To some extent, the intention of the individual when making the expenditure must be considered. The degree to which consumer preference

enters into the selection of clothing may determine what percentage of the expenditure can be treated as pure investment. For example, if an individual prefers to wear jeans and a sweatshirt and only bought the suit for wearing to job interviews and possibly for work once employment was obtained, then the whole of the expenditure may be pure investment. If, however, the individual likes to wear tailored suits and always dresses in this manner, then perhaps the expenditure is pure consumption. There is also the question of quantity, given that there is a basic minimum wardrobe required for a person working at the management level. Suppose this minimum is five suits. A woman manager has twenty-five suits. At some point between five and twenty-five, she has stopped investing and started consuming. A similar parallel exists in food consumption (Schultz, 1971a). Some level of food is necessary for an individual to be able to work at all, but after that level is surpassed, then the expenditure must be considered consumption (Schlutz, 1971a). Below that level, the food is a producer good - a necessary input to accomplish work (Marshall, 1930; Pigou, 1947).

It is perhaps that because we live in an affluent society that we do not recognize expenditure on basic human needs as producer goods. Economists who are concerned with the investment components usually study pre-industrialized countries where work is mainly the application of brute human force (Brahmanand and Vakil, 1956).

Schultz (1971a) defines three classes of expenditure which may help classify clothing expenditure:

1. Expenditures that satisfy consumer preferences and in no way enhance the capabilities of the individual to earn income. These represent pure consumption.

2. Expenditures that enhance the capabilities of the individual to earn income and do not satisfy any preferences underlying consumption. These represent pure investment.
3. Expenditures which are partly consumption and partly investment.

This investment component of clothing has not been considered in the models of the process of consumers' fashion adoption (Sproles, 1979). Neither does it appear to be considered in any of the consumerism literature, even though the investment in human capital is generally recognized as belonging in the consumption economic discipline.

F. Summary

The review of literature relevant to this study has indicated that the appearance of an individual is a major factor in the perception of that individual by a stranger. Several sub-components combine to make up appearance - grooming, body movement, clothing and physical features of the individual. The interview, as a selection device, has been shown to be widely used. Some authors feel that the personal interview carries the majority of weight in the hiring decision (Beach, 1975). If appearance, or its sub-components, dress and clothing, affects the perception of the individual, then it follows that this will affect the hiring decision. In most cases, the interviewee is unknown to the interviewer, and it has been indicated that appearance is a major factor in the perception of strangers. The biographical data of the interviewee is usually brief and may not contain enough information for a decision to hire. The interviewer must reach a decision as to the suitability of the applicant quickly, and usually

does if the research cited earlier is correct. If the interviewer does reach a decision within the first five minutes of the interview, what attributes of the interviewee have caused this reaction in the interviewer?

The results of several previous studies would seem to indicate that there is a specific mode of dress expected at a job interview. If this mode of dress is necessary for the interviewee's success, then it must be considered a producer good. If dress or clothing is a producer good, then investment in these sub-components of appearance could result in economic gain for the interviewee.

III. METHODOLOGY

A. General Procedure

The procedural methodology for this study was an adaptation of the study done in Agricultural Economics by Zvi Griliches in 1964. Griliches' study explored the relationship between research and extension expenditures and the aggregate agricultural production function. His basic approach consisted of estimating an unrestricted production function, using separate variables for each of the five major input categories, and introducing, in addition, a measure of education per worker and a measure of public expenditure on research and extension per farm into the estimating equation. The methodology used by Griliches enabled him to establish empirically the significant relationship between education and agricultural production, furthering the case for extension education in the theory of human capital.

For the purpose of this study, Griliches' approach was adopted to establish the relationship between clothing and employment. Where Griliches used production value as the dependent variable, the interviewee's score assigned by the interviewer was substituted. Substituting for five major input categories used by Griliches were the attributes commonly believed to influence the decision to hire. These attributes were those classes of information generally requested on application forms (such as education and work experience) and generally rated by interviewers (such as communication skill and personal suitability). Just as Griliches added education per worker to the basic

function as a variable, this study added variables which measure appearance, dress and clothing to the basic employment function.

B. Location and Facilities Selection of Sample Size

In order to create an atmosphere simulating an actual interview situation, facilities had to be found which met specific criteria. Small, sound-proof offices with a desk and two chairs were necessary. Since observation in the interview room was necessary to this research, a two-way mirror was required. These specific requirements were found in the client counselling rooms in the Clinical Services area of the Education Building at the University of Alberta. These rooms are usually used by educational psychologists for individual testing and counselling sessions. A problem, however, was encountered with the use of these rooms due to the fact that they are in almost constant use. The only time that a block of time could be booked was on Saturday afternoons. The booking of these rooms for this research was always subject to the needs of the regular users of these rooms. Also, these facilities could not be used at all after the first week of April until September. These facilities were still superior to other facilities available, even though the limits on time allowed for use of the rooms for a limited period.

C. Sample Selection and Determination of Sample Size

The sample consisted of volunteers from the general population of the University of Alberta. A limited advertising campaign of posters and advertisements in the campus newspapers was run, offering

the chance to participate in a practice job interview. In return for their participation in the study, feedback was promised as to the strengths and weaknesses exhibited during the interview. This interview was seen as equivalent to the on-campus screening interview illustrated in the Sequential Elimination Model (Figure 1).

There were three factors which were potentially limiting to the size of the sample. The first, already mentioned, was the availability of the facilities in which the interviews were to take place. This affected the sample in two ways. First, the total number of hours that the rooms were available instituted an upper limit on the total number of people which could be interviewed. The second effect on the sample was that individuals who wished to participate but could not come on Saturday afternoons could not be accommodated.

The second factor which affected the sample stems from the voluntary nature of participation in this study. This also affected the research in two ways. The number of subjects agreeing to participate directly affected the size of the sample. Since a large number volunteered, participants had to be selected randomly from the pool. The second way the use of a volunter sample affected the research was due to the type of individual who volunteers for such research. It is conceivable that volunteers differ from the general population in areas such as motivation, interest in self-improvement, etc.

The third factor, and that which proved to be the most limiting, was the amount of interviewer time which could be arranged. The specific problems encountered with the interviewers will be discussed later in this chapter.

In order to ascertain the minimum sample size required, given the limiting factors previously mentioned, a power analysis was performed (Cohen and Cohen, 1983). The regressions will be performed in sets, using the $SPSS_X$ computer program, the formula for determining N^* for the F test of SR^2B with model 1 Error was used. The following levels were set:

Significance criterion	= 0.05
Power for the F test	= 0.80
Number of source df (K_B)	= 7.00
From these criteria, L was determined using Table E.2 (Cohen and Cohen, p. 257) yielding L	= 13.62

The determination of f_2 is usually accomplished by drawing on past research or theory. Because there is no previous research in this particular area, the criteria for setting f_2 level as described by Cohen and Cohen (1983, p. 160) was used. A relatively large f_2 value but still acceptable in social sciences research) of .35 was chosen for N^* determination.

Using the equation

$$N^* = \frac{L}{f_2} + K_A + K_B + 1$$

where K_A = df of set A

K_B = df of set B

The previous determined values were substituted:

$$N^*_2 = \frac{13.62}{.35} + 6 + 6 + 1$$

$$= 51.9$$

In order to achieve power of .80 with a significance criterion of .05 in a regression equation with up to 12 independent variables, a sample size of at least 52 was deemed necessary, assuming that the f_2 value chosen was reasonable.

D. Instrument Selection and Development

Several previously developed and tested instruments were selected for use in this research.

Social Class

The Two Factor Index fo Social Position (Hollingshead, 1957) was used to determine the social class of the participants. This index requires the precise occupational role and amount of formal schooling of the head of the participating household. This particular instrument was selected because of its inclusion of both male and female occupations and because of the relative ease for the researcher in determining Social Class from the computed scores. It yields a range of social classes from one to five, with one being upper class and five being lower class. The reliability and validity of this instrument is reported in Hollingshead and Redlich (1958, pp. 398-407) and is widely used in social science research.

Body Boundary

Fisher and Cleveland (1958, 1965) propose that the way a person experiences his body boundaries is fundamental to his body image. The body-boundary measure or barrier score is an index of the "body as

experienced" and is believed to be associated with feelings toward one's body. The individual who experiences definite body boundaries has been found to be more open and less defensive in dealing with the environment than the person with indefinite boundaries. The barrier score has been positively related to spontaneous expressiveness, independence, autonomy, and ability to operate effectively without guidance. As these attributes would seem to be desired in an employee, it was felt that the Barrier Index may affect the success of a job applicant in an interview situation. Further, because individuals experiencing definite body boundaries do not place particular importance on clothing (Kernaleguen, 1968; Kernaleguen and Compton, 1968), it was believed that the barrier score may be a mediating factor in the interview situation with clothing.

The Body Boundary Index, devised by Fisher and Cleveland (1958), was to be obtained through the administration of the first 25 cards of Form A of the Holtzman Inkblot Techniques. Protocols were to be scored by Fisher using the method devised by Fisher and Cleveland (1958; 1965) of counting all the responses to the inkblots which emphasize the containing or protective covering which might be related to the perception of body-image boundaries. As will be explained later, the use of this instrument had to be abandoned due to problems encountered during the pilot study.

The Respondent's Resume

A two-page resume was developed to gather the demographic information on each respondent. The first page requested identifying

information so that the feedback report could be sent to the respondent. It also requested information which is not generally asked for on an application form. Age, sex, height and weight, place of origin were asked for. Also, the head of the household's occupation and formal education were the basis of the Social Class of the respondent using the Hollingshead Scale. If currently enrolled as a University of Alberta student, the Grade Point Average for the latest year was requested. This first page was removed before the interviewer saw the respondent. The interviewer was only given the second page, which was a brief summary of the respondent's education and employment history. This second page summary was based on the application form currently in use by the Alberta Government. Rather than fill out this second page, some respondents elected to present their own resume. In this case, any information extraneous to that contained on the provided form was obliterated before presentation to the interviewer. A sample resume is contained in Appendix I.

Interviewer Script and Score Sheet

The Interviewer's Script and Score Sheet was developed in co-operation with an employment officer from the Canada Employment Centre. The most common rating factors and questions which would allow the interviewer to determine the merits of the respondents in regards to those factors were selected. It was decided the interviewer would score the respondents on the following factors:

1. Knowledge (20)

2. Abilities

   a) Ability to Direct (10)

   b) Ability to Organize & Plan (10)

3. Communication Skills

   a) Articulation & Pronunciation (10)

   b) Grammar (10)

   c) Fluency (10)

4. Personal Suitability

   a) Motivation (10)

   b) Interpersonal Skills (10)

   c) Attitude (10)

   d) Confidence (10)

The interviewer was provided with a scale from 0 to 10 for each factor, with two questions for knowledge (this factor scored out of 20). Hence, the range of possible scores was 0 to 110. A major problem was encountered in selecting questions for the knowledge section of the script. First, because the interviewers were not knowledgeable in every area of study from which respondents came, they were unable to judge the correctness of answers to area-specific questions. Second, although it had been originally planned to have all the respondents from one area of study in the same interview session, this proved impossible to schedule, and students from different academic areas had to be included in the same session. In order to get general knowledge type questions suitable for university graduate level, two questions of moderate difficulty were drawn from the Graduate Record General Exam. It was assumed that all candidates would have an equal chance

of getting them correct since this exam is written by fourth-year students from all disciplines. Answers to these questions were provided to the interviewers. A copy of the preliminary interview script and score sheet is contained in Appendix II.

Viewer's Evaluation

Three people were stationed behind the two-way mirror and could not hear what was being said within the interview room. They were provided with the operational definitions of this study which dealt with appearance, clothing, dress, etc. The instrument (Appendix III) provided scales from 0 to 10 for each variable. The first variable, appearance, was to be scored immediately upon seeing the respondent. The viewers were then to list every visible garment and accessory worn or carried by the respondent. The rest of the evaluation was quite straightforward. It must be noted that each viewer scored and ranked each respondent independently of the other two viewers. This was done to maximize any variations in opinion. The independent scores for each variable were then totalled and averaged and the average score taken as the viewer score.

E. Pilot Test

It was decided to perform a pilot test to ascertain if the proposed procedure was feasible due to the large number of people involved, and the complex nature of the data collection procedures to be followed promised unforeseen complications.

The interviewers were senior Family Studies Majors who had completed a course on interview techniques. Although not specifically trained in employment interviewing, a training session with a Canada Employment Officer was arranged to give the student interviewers further background on personnel interviewing. They were also given practice in interviewing and scoring "practice" candidates using the prescribed interview script and score sheet.

Respondents used for the pilot test were individuals who volunteered to participate in the study and who were available during Reading Week. There was no other difference between these respondents and those who would be included in the real study. The respondents were scheduled at twenty-minute intervals and the number of interviewees limited to five for any particular interviewer.

The three individuals acting as viewers were all graduate students in Home Economics, but from different areas of specialization.

A psychology student was in charge of administering the Holtzman Inkblot Technique.

Several problems were identified and changes to the design made as a result of the pilot study and the immediate aftermath.

Problem Areas Identified with Original Design

The first problem and that of primary importance to the study concerned the student interviewers. Although twelve students originally volunteered to act as interviewers, only five appeared for the training session. These five indicated that they were only able to spare about two hours each to the study. This was far less interviewer

time than was required to complete the study with an adequate sample size. Also, after studying the data generated by the pilot test, there was an indication of unexpected biases. It was not apparent if these biases were the result of the students' inexperience or if these biases are generally present in all interviewers. The first major change, therefore, was to abandon the use of student interviewers and to enlist individuals from the business community who had interviewing experience. It was felt that any findings would then reflect the biases operating in the real job market, and be more accurate than those of the inexperienced student interviewers.

The second problem concerned the administration of the Holtzman Inkblot Test. Although the average time for a respondent to complete this test is less than fifteen minutes, several individuals took in excess of forty-five minutes. This made it impossible to maintain the smooth flow of people through the interview process. Two solutions to this problem were proposed, the first was to have the respondents come back another day for administration of the Inkblot Technique when more time could be made available. The second alternative was to abandon use of the Inkblot Technique and to substitute other instruments in its place. The proposed substitutes were the Rosenberg Self-Esteem Scale and the Body Cathexis Scale. These were considered to measure a construct similar to that measured by Body Boundary. As it was believed that the possibility of getting respondents to return a second day was remote, the second alternative was chosen.

Self-Esteem Scale

The Rosenberg Self-Esteem Scale was selected to measure participants' self-esteem in this study. The scale was developed by Rosenberg (1965) and extensively utilized in his studies of adolescents. The scale is a Guttman type scale consisting of ten attitude statements about one's self, and providing four response alternatives: strongly agree, agree, disagree, strongly disagree. The possible range of scores is from 0 (high self-esteem) to 6 (low self-esteem). Rosenberg reported a reproducibility coefficient of.92 for the scale. A copy of this instrument may be found in Appendix VI.

The scale is based on "contrived items" (Stouffer et al., 1953), and as stated previously, yields a 7-point scale. Scale Item I is contrived from the combined responses to items 3, 7, and 9. If the respondent answers 2 out of 3 or 3 out of 3 positively, he receives a positive (that is, low self-esteem) score for Scale Item I.

Scale Item II is contrived from the combined responses to items 4 and 5. One out of 2 or 2 out of 2 positive responses are considered positive for Scale Item II.

Scale Items III, IV, and V are scored simply as positive or negative based on responses to items 1, 8, and 10.

Scale Item VI is contrived from the combined responses to items 2 and 6. One out of 2 or 2 out of 2 positive responses are considered positive.

The reproducibility and scalability coefficients suggest that the items have internal reliability. Silber and Tipett (1965) showed a two-week test-retest reliability of $r = .85$.

Yamamoto and Wiersma (1967) used the Rosenberg scale in a study of 96 student teachers. They found the scale to discriminate between levels of self-esteem of the subjects and found significantly higher self-esteem in female rather than male student teachers.

Wylie (1974) in her extensive and thorough review of instruments for measuring self-concept strongly recommended the Rosenberg scale. Her recommendation was based on what she judged to be the impressive validity and reliability of the scale as well as its simplified approach to measuring self-esteem.

Kernaleguen and Conrad (1980) found a Pearsonian Correlation of .60, significant to the .01 level or better, between the Rosenberg scale and the Tennessee Self-Concept Scale. They noted that the subjects found the Rosenberg Scale quick, short, and easy, and took subjects an average of 3 minutes to complete. The Tennessee Scale took an average of 10 minutes to complete, and the family sub-scale of the Tennessee Instrument was questioned by respondents who were living alone. These factors were considered most important in the decision to use the Rosenberg scale in this study.

Body Cathexis

This scale, developed by Secord and Jourard (1953), was designed to measure feelings of satisfaction or dissatisfaction with different parts or processes of the body. It has 46 items which identify body parts or functions and are rated on a five-point scale:

(1) Have strong feelings and wish change could somehow be made

(2) Don't like, but can put up with

(3) Have no particular feelings one way or the other

(4) Am satisfied

(5) Consider myself fortunate

In the present study, as in the work by McLean (1978) and Kernaleguen and Conrad (1980), three items which might be considered offensive were removed from the list. They were distribution of hair over body, elimination, and sex activities. The elimination of these three items gives a possible range of scores from 43 (low satisfaction) to 215 (high satisfaction). A copy of the instrument is contained in Appendix VI.

The coefficient of reliability reported by the author for the 46-item scale was .78 to .83. Wylie (1974) states that it is impossible to estimate convergent validity of the scale because no other scale claims to measure the construct as defined by Secord and Jourard. The scale, according to the authors, has shown theoretically predicted correlations with a number of other variables.

Kernaleguen and Conrad (1980) report this scale to be good for body acceptance, while noting that body is only part of the self. They found a Pearsonian Correlation of .30, significant to the .01 level or better between the Rosenberg Scale and Cathexis and a correlation of .61 between the Tennessee Self-Concept Scale and Body Cathexis ($p < .01$).

The third problem arose when the ratings of the viewers were compared with those of the interviewers. They were remarkably similar, but with some notable exceptions. Since the interviewer was collecting information both visually and aurally, while the viewers were only

collecting information visually, it was proposed that the differences in scores may be explained by either the content of the answer or the way in which the respondent answered the question. It was decided that a listener would be necessary. Analysis of the viewer's score sheets showed remarkable similarity among the independent scores of the three viewers. Two of the viewers were eliminated and a listener was substituted in their place. This was seen as an improvement in two ways. Initially, because three people had to view the interview, the drapes covering the two-way mirror had to remain wide open. This was disconcerting for both the interviewee and the interviewer. The use of only one viewer allowed for the drapes to be closed so that only a slit narrow enough for the viewer to peer through remained. This was so inconspicuous that no one asked if they were being watched after their interview. During the pilot study, this was asked by every candidate and by every interviewer. The closed drapes also ensured that the listener would not be influenced by any visual stimulation. The viewer would still not hear what was said, as the listener would use earphones connected to microphone in the interview room.

The second advantage of using a listener in place of the two viewers was that the study now had an independent score of the respondent's communication ability. This was seen as superior to the originally proposed method of having the interviewer score communication ability, but not including this ability score in the respondent's total score.

The fourth problem was in regard to the amount of time scheduled for each interviewer. The student interviewers found it

impossible to keep the interview to less than twenty minutes and blamed the knowledge questions as taking an inordinate amount of time. Analysis of the interviewers' score sheets showed that if the knowledge scores were disregarded, there was no change in relative position among the respondents. This, coupled with the desire to have the interviews relatively short, led to the decision to drop the knowledge questions from the interview script. Since the knowledge component was now gone, the interview schedule was redone, again with the assistance of the Employment Officer from the Canada Employment Office. The revised interviewer script and rating form are contained in Appendix IV.

The new interviewers were professionals in the field and it was felt the training they needed was minimal. They were provided with information by the Canada Employment Officer regarding the Assessment of Candidates. They were also given the opportunity to practice the interview script and using the rating form. All were familiar with similar methods of rating candidates.

Another problem encountered during the pilot test concerned the respondents either showing up late for their scheduled interview or failing to come at all. An attempt to remedy this situation was to overbook respondents. While respondents still failed to appear, there was always someone ready to be interviewed. Rather than pre-assigning respondents to a specific interviewer, the first respondent to arrive was interviewed by the first interviewer to be free. This was seen as a way of randomizing the sample, as any respondent had an equal chance of being interviewed by any interviewer on a given day. The interviewer was unaware of who they would interview until the next respondent was shown into their interview room.

F. Revised Design

As stated previously, members of the general university population were offered the opportunity to participate in a practice job interview. When they contacted the designated office, they were given a packet of information (Appendix I). This packet contained a description of the process they would follow, a resume form and a release form. They were to complete the resume, sign the release form and were then assigned an interview time.

When the respondent arrived for the interview appointment, he/she was shown into a room equipped with a two-way mirror and a hidden microphone. The applicant was interviewed by a professional interviewer. The interviewer followed a standard script and set of questions with which they were familiar. The interview was viewed from behind the two-way mirror by one viewer. The viewer rated the various attributes of the respondent using the prescribed form (Appendix V). The viewer was not able to hear the interview conversation. A listener was able to hear the interview conversation, but did not see the respondent. The listener also rated the various attributes of the respondent using the prescribed form (Appendix VI). The interviewer scored the applicant in the same way he/she would in a normal interview using the prescribed form (Appendix IV). When all the respondents in a specific group were interviewed, the viewer, the listener, and the interviewer would rank the respondents from 1 to 5 with 5 being the most desirable candidate and 1 being the least desirable.

After the respondent's interview was completed, he/she was sent back to the receptionist, who gave him/her the Rosenberg Self-Concept

Scale and the Body Cathexis Scale. After these were completed, the respondent was free to leave.

In summary, for each respondent, there were six files of data.

1. Resume information
2. Interviewer evaluation
3. Viewer evaluation
4. Listener evaluation
5. Rosenberg score
6. Cathexis score

The six files of data were merged and coded to make a complete case for entry into the computer for analysis.

G. The Variables

The variables for which data were collected are listed below by the source document from which they were obtained.

1. Respondent's Resume

   STATUS - student vs non-student

   CONTACT - how the respondent learned of study

   BIRTH - birthdate of respondent

   SEX - sex of respondent

   HEIGHT - height of respondent

   WEIGHT - weight of respondent

   HOME - place of origin of respondent

   FOCC - occupation of head of household

   FEDU - education of head of household

GPA - grade point average

JOB - career goal of respondent

MAJOR - department in which registered

DEGREE - program in which currently registered

GRADYR - year expected to obtain this degree

PTSECYR - years of post-secondary education

EMPLYR - years of employment

SUMMER - summer employment experience only

FULLTIME - full-time employment experience

RESUME - respondent used own resume

2. Interviewer Score Sheet

IDIRECT - ability to direct

IORGANIZE - ability to organize

ICOMTOTR - ability to communicate

IMOTIV - motivation of respondent

IPEOPLE - interpersonal skills

IATTDE - attitude of respondent

ICONFID - confidence of respondent

ICREATE - ability to create and innovate

IANALYZ - ability to analyze and evaluate

IPLAN - ability to plan

TOTALR1 - sum of all ISCORES without ICOMTOTR

TOTALR2 - sum of all ISCORES

IRANK - assigned rank by interviewer

3. Listener Score Sheet

LGRAMR - grammar

LCLARTY - clarity of speech

LFLUENCY - fluency

LCONCISE - conciseness

LLOGIC - logic

LACCURCY - accuracy

LVOLUME - volume

LACCENT - degree of accent

ACCNTTYP - type of accent

LATITUD - attitude of respondent

LPERSON - interpersonal skills

LCONFDNC - confidence

LSCORE - total of score of all L variables without LACCENT, ACCENTTYP, LATTUD, LPERSON, and LCONFDNC

LRANK - assigned rank by listener

4. Viewer Score Sheet

VAPPEAR - appearance

VFIT - fit of respondent's clothes

VCOND - condition of respondents' clothes

VCOST - cost

VFASHION - fashionability

VGROOM - grooming

VRACE - racial origin of respondent

VBODY - body language

VATTDE - attitude

VPEOPLE - interpersonal skills

VCONFID - confidence

VBEHAV - behavior

VCLOTH - clothing

VDRESS - dress

VRANK - assigned rank by viewer

VNEGMAN - negative mannerisms

FORMLTY - formality of dress

5. Rosenberg Self-Concept Scale

ESTEEM - score obtained

6. Body Cathexis Scale

CATHEXIS - score obtained

Besides these variables, certain new variables were calculated or recoded for use in the regression analysis. These were:

Calculated Variable	Description	Calculated from Variable
AGE	age of respondent	BIRTH
OVERWT	overweight respondent	HEIGHT, WEIGHT
UNDERWT	underweight respondent	HEIGHT, WEIGHT
ALBERTA	respondent from Alberta	HOME
CANADA	respondent from Canada	HOME
SES	social class	FOCC, FEDU

Calculated Variable	Description	Calculated From Variable
MOTHER	mother head of household	FOCC, FEDU
BACH	respondent had bachelor's degree	DEGREE
MASTRS	respondent had one master's degree	DEGREE
STLMORE	respondent had more than one master's degree	DEGREE
DRACE	caucasian or non-caucasian	VRACE
ACCNTDUMY	presence of accent	LACCENT

H. The Variable Sets

As stated previously in the section on the determination of sample size, the regressions were done in sets. Therefore, it was necessary to re-group the variables into the sets for data analysis. Some variables were placed in more than one set.

Set A - Descriptors

The first group to be formed consisted of those variables which were used to describe the demographic features of the sample. Some of these were also used to split the data file for specific analysis. The variables used to describe the sample were:

STATUS - student or non-student

CONTACT - how the respondent learned of study

AGE - age of respondent

SEX - sex of respondent

HOME - place of origin

JOB - career goal of respondent

MAJOR - department in which registered

SUMMER - summer employment experience only

FULLTIME - full-time employment experience

VRACE - race of respondent

ESTEEM - score from Rosenberg Self-Concept Scale

CATHEXIS - score from Body Cathexis Scale

SES - social class from Hollingshead Index

MOTHER - female head of household

BACH - respondent has bachelor's degree

MASTRS - respondent has master's degree

STLMORE - respondent has more than one master's degree

Set B - Base Group

The second group to be formed consisted of those variables which are equivalent to those classes of information usually asked for on application forms and those generally rated by interviewers. These variables measured the attributes commonly believed to influence the decision to hire and will form the basic regression equation to which the other sets of variables will be added. These are:

GPA - grade point average

BACH - respondent has bachelor's degree

MASTRS - respondent has master's degree

STLMORE - respondent has more than one master's degree

PTSECYR - years of post-secondary study

EMPLYR - years of employment

LSCORE - total listener's score

LATITUD - attitude of respondent (listener)

LPERSON - interpersonal skills (listener)

LCONFID - confidence (listener)

LATTDE - attitude (viewer)

VPEOPLE - interpersonal skills (viewer)

VCONFID - confidence (viewer)

Set C - The Discriminators

Human rights legislation in recent years has made it illegal under The Individual's Rights Protection Act to discriminate against an individual on the basis of race, religious beliefs, colour, age, sex, physical characteristics, ancestry, or place of origin. The variables in this set are measures of these discriminatory attributes and were included in this study because they give visual or aural clues to the interviewer. They are:

AGE - age of respondent (age)

SEX - sex of respondent (sex)

OVERWT - overweight respondent (physical characteristics)

UNDERWT - underweight respondent (physical characteristics)

ALBERTA - respondent from Alberta (place of origin)

CANADA - respondent from Canada (place of origin)

SES - social class (ancestry)

ACCNTDUMY - presence of accent (ancestry)

DRACE - race of respondent (race)

Set D - Behavioral Measures

The fourth group of variables are those which measure the respondent's perception of satisfaction or dissatisfaction with themselves:

ESTEEM - self-esteem

CATHEXIS - satisfaction with body parts

Set E - Appearance, Dress and Clothing

The variables in this group were the measures of the respondent's attributes on which this research was centered. They are:

VAPPEAR - appearance of respondent

VFIT - fit of respondent's clothing

VCOND - condition of respondent's clothing

VCOST - apparent cost of respondent's clothing

VFASHION - fashionability of respondent's clothing

VGROOM - grooming of respondent

VCLOTH - clothing appropriateness

VDRESS - dress appropriateness

FORMLTY - formality of respondent's dress

I. Data Analysis

Multiple Regression Analysis

Data were analyzed using the multiple regression technique. The standard notation for this type of equation is:

$y^1 = a + b_1x_1 \ . \ . \ . + b_kx_k$

where y^1 = predicted scores of the dependent variable

x = the scores of the independent variable

a = intercept constant

b = regression coefficient

The analysis of the data and the testing of the hypotheses were accomplished by the following steps:

1. An analysis of correlation and covariance was run on all the variables to be used in the regression equations to determine if problems with collinarity would be encountered.
2. Scattergrams and preliminary R plots were performed with each of the independent variables against the dependent variable to ascertain if a linear relationship existed between each pair.
3. Variables which did not appear to have a linear relationship with the dependent variable on first analysis were manipulated into linearity by means of non-linear transformation and the scattergrams and preliminary R plots run again.
4. The basic equation was constructed using the variables in Set B as the independent variables and the regression performed.
5. The results of the previous regression analysis were analyzed, looking particularly for goodness of fit, plausibility of signs, significance of coefficients, and correlation between the independent variables not previously noted.
6. Once an acceptable basic function was found, the testing of the hypotheses was attempted.

J. Hypotheses Testing

The data collected in this study were analyzed using an hierarchical analysis of sets procedure, hence, it will be useful at this point to restate the hypotheses to be tested and to designate exactly what criteria were used to reject or fail to reject any of the hypotheses.

As stated previously, a basic equation was constructed using the independent variables of Set B. The R^2 of this regression equation indicated what proportion of the variable of Y^1 was explained by this specific set of independent variables. The addition of another set of variables (for example, Set C) to Set B resulted in an increment in the Y variance. This quantity is properly called an increment because it is not mathematically possible for it to be negative, because $R_y^2 \cdot BC$ cannot be smaller than $R_y^2 \cdot B$ (Cohen and Cohen, 1983, pp. 139-147). Of interest to this study is not the characteristics of the sample for which these values were determined but rather those of the population from which it comes. Therefore, the mechanism of statistical inference posits the null hypothesis to the effect that in the population, there is literally no increment in the Y variance accounted for when C is added to B. When the null hypothesis is rejected, it must be concluded that Set C does account for Y variance beyond that accounted for by Set B in the population. The null hypotheses were tested by use of the significance of F. F is the ratio of these mean squares that, when the null hypothesis is true, has an expected value of about one. When F is sufficiently large to meet the significance criterion, the null hypothesis must be rejected.

Therefore, the null hypotheses to be tested are as follows:

1. When the variable VAPPEAR is added to the basic equation, the increment in the Y variance accounted for will not be significant.
2. When the variable VDRESS is added to the basic equation, the increment in Y variance accounted for will not be significant.
3. When the variable VCLOTH is added to the basic equation, the increment in Y variance accounted for will not be significant.
4. When the variables in Set C are added individually to the basic equation, the increment in Y variance accounted for will not be significant.
5. When the variables in Set D are added individually to the basic equation, the increment in Y variance accounted for will not be significant.
6. When the variables in Set E (excluding VAPPEAR, VDRESS and VCLOTH) are added individually to the basic equation, the increment in Y variance accounted for will not be significant.

IV. PRESENTATION AND INTERPRETATION OF RESULTS

The data for this study were obtained from the following instruments: the resume, the interviewer's score sheet, the viewer's evaluation, the listener's evaluation, Rosenberg's Self-Concept Scale, and the Body Cathexis Scale. The data used for this analysis were obtained from 60 volunteers submitting to practice job interviews with professional interviewers from the Edmonton business or social service sector and from subsidiary testing after the interview. Analysis of the data resulted in findings which are presented under the following headings: (1) description of respondents, (2) description of interviewers, (3) determination of relationship, (4) analysis of possible dependent variables, (5) regression analysis on findings, (6) hypotheses testing and (7) discriminant analysis of variables used in regression analysis.

As one of the objectives of this study was to discover any specific attributes of those volunteers which had the greatest probability of being hired and those with the least probability, the final headings for this section, (8) description of respondents most likely to be hired, and (9) description of respondents least likely to be hired will conclude this section.

A. Description of Respondents

The sample was made up of 60 volunteers from the student, alumni and non-academic staff population of the University of Alberta. The alumni and non-academic staff were included to increase the

variation in the areas of education and years of work experience. The demographic characteristics of the respondents are given in Table 2.

Table 2

Demographic Characteristics of Respondents

	Number	Valid Percent
Status		
- student (currently registered)	45	75.0
- alumni	9	15.0
- non-student	6	10.0
Geographic Area (Home)		
- Alberta		
- city	21	35.0
- town	14	23.3
- rural	6	10.0
- Ontario-Quebec	5	8.3
- Europe	5	8.3
- Middle East	1	1.7
- Orient	7	11.7
- South America	1	1.7
Social Class		
- Upper	9	15.0
- Upper-middle	9	15.0
- Middle	21	35.0
- Lower-middle	16	26.7
- Lower	5	8.3
Sex		
- Male	28	46.7
- Female	32	53.3
Age		
- Range = 19 to 39		
- Mean = 25.17		
G.P.A.		
- Range = 5.2 to 8.4		
- Mean = 6.8		
- with 6 respondents having no U of A G.P.A.		
Education Level		
- 44 had or would have Bachelor degree by April 1984		
- 7 had or would have Master's degree by August 1984		
- 3 had or would have more than one Master's degree		
- 6 had not completed a post-secondary degree		

Table 3 was developed to compare the faculty representation of the sample to that of the University student population (Holdoway, E.A. and Quigg, B.M., 1985).

Table 3

Faculty Representation of Sample

	Student Population (Grad. & Undergrad.) January 1985		Study Sample	
Faculty	N	Valid %	N	Valid %
Agriculture & Forestry	988	4.2	0	-
Arts	4765	20.2	6	10.2
Business	1751	7.4	19	31.7
Dentistry	277	1.2	0	-
Education	3835	16.3	11	18.3
Engineering	2447	20.4	5	8.3
Home Economics	432	1.8	5	8.3
Law	513	2.2	0	-
Library Science	59	.3	1	1.7
Medicine	1119	4.8	1	1.7
Nursing	544	2.3	0	-
Pharmacy	381	1.6	2	3.3
Physical Ed. & Rec.	806	3.4	0	-
Rehab. Medicine	391	1.7	2	3.3
St. Jean	284	1.2	0	-
Science	4958	21.1	2	3.3
Non-Student or Alumni	-	-	6	10.0
	23,550	100%	60	100%

The analysis of the demographic features of the respondents reveals several salient features. The sample was almost equally split between males and females and, although the majority originated in Alberta, there was representation from other areas of Canada and from other countries. The range of ages was larger than expected, as the usual age for completing a bachelor's degree is generally 21 or 22. The large proportion of respondents over 22 cannot be wholly ascribed

to graduate students, alumni or non-students, but perhaps can be explained by the increasing number of mature students in the undergraduate student population. The distribution of social class levels was also not expected as it is generally believed that the class distribution of the university population is skewed towards the upper class, not the lower as was the case in the sample. Hiller's study (1971) indicated that the socio-economic levels of the University of Alberta's population was well above the norm. Perhaps the low SES of this sample indicates that getting a job is much more important to individuals of lower socio-economic class.

The representation by faculty was also unexpected. Although it was expected that the Business faculty would be well represented, it was not expected that Arts and Sciences, the two largest faculties, would be so under-represented. Even more surprising were the faculties for which there was no representation, notably Agriculture-Forestry, Nursing and Physical Education-Recreation. The participation rates of the various faculties may have been influenced by the employment outlooks for graduates in these faculties.

Although there was some concern when this study was proposed that there would not be enough variation among the respondents to perform meaningful regressions, this concern was found to be unwarranted.

B. Description of Interviewers

Twelve interviewers scored and ranked the respondents. Ten of these were currently employed by either businesses or service agencies and had as part of their duties the responsibility of interviewing and

hiring employees. One was a recently retired personnel officer from the private sector. The last one was semi-retired and was still involved in the hiring of employees. Five of the interviewers were originally from locations outside of Alberta, but all had worked in Edmonton for a minimum of two years. The youngest interviewer was 30 years old; the oldest was 66 years old, with the mean age of the interviewers being 46.8 years. Only one of the interviewers was male. All were caucasians.

The selection of interviewers can in no way be considered random and it must be noted that obtaining qualified interviewers was the most difficult part of this study. An equal number of male and female interviewers would have been preferred as would have been the inclusion of interviewers who were not caucasian. This, however, was not possible. Given these limitations, it must still be noted that the interviewers who did volunteer to help with this study were actually (or until 6 months previously) functioning members of the business and service community and who regularly made decisions to hire new employees.

C. Determination of Relationships

Before attempting the regression analysis proposed in this study, possible collinearity between the independent variables had to be investigated. This was accomplished by using the Non-Parametric Correlation Command of the $SPSS_X$ Statistical Package for the ordinal level variables, as well as the Pearson Correlation Command for the variables with higher data levels.

The most potentially limiting finding, as far as the proposed regressions were concerned, was the high correlation present between all the variables scored by the viewer. Because these variables were correlated to the .85 level or above, problems with collinearity would definitely be encountered if more than one of the viewer scores were used in a single regression equation. Although it would be possible to combine two or more of these correlated variables together to create a new variable, it was decided to limit the inclusion of only one viewer variable per equation.

These correlations provided some additional information besides that needed to determine collinearity. Inherent in the research design was the independent rating of certain respondent attributes by the interviewer, the viewer and the listener. The scores assigned to these attributes by the interviewer were significantly correlated to scores assigned by the viewer. There was no correlation between the interviewer's scores and the scores of the listener. The scores of each attribute of the respondent by the interviewer were to be totalled to give the total score for the respondent and thus (in the majority of cases) the success of the respondent in the interview. Therefore, because these scores correlate with the scores of the viewer (who could not hear the respondent) but did not correlate with the scores of the listener (who could not see the respondent), it would appear that the interviewers were influenced more by information collected visually than aurally from the respondent. There was also no correlation between the scores of communication ability of the respondent by the interviewer and the listener. Because the interviewer, the viewer and

the listener were each asked to rank the candidates from most likely to least likely to be hired, these were also correlated. Again, the interviewer-viewer correlation was significant, but the interviewer-listener correlation was not. The correlation analysis of these variables are found in Table 4.

Table 4

Correlations (Pearson R) between Selected Interview Scores and Viewer/Listener Scores

Attribute	Viewer	Listener
Attitude of Respondent	.2707 (.010)	.0154 (.885)
Interpersonal Skills	.2346 (.026)	.0896 (.401)
Confidence of Respondent	.2160 (.037)	-.0522 (.616)
Communication Ability	-	-.0204 (.842)
Rank of Respondent	.2460 (.020)	.0544 (.597)

Significant correlation was also found between years of employment experience and communication ability; years of employment and self-esteem; years of employment and the race of the respondent. Race was also found to be significantly correlated with communication ability. These correlations were interpreted that, as employment experience increased, so did the individual's ability to communicate and self-esteem was generally higher. Caucasian respondents were likely to have more years of employment experience and rated better on communication ability. No significant correlation was found between race and

self-esteem. The coefficients for these correlations are found in Table 5.

Table 5

Correlations (Kendall) between Race, Communication Ability, Years of Employment and Self-Esteem

N = 60

	RACE	EMPLYR
ICOMTOTR	.3280 (.0033)	.3372 (.0011)
EMPLYR	.2570 (.0127)	-
ESTEEM	-.0605 (.4111)	-.2704 (.0091)

In order to perform a regression, the independent variables must have a linear relationship with the dependent variable. The linearity of the independent variables was determined by using the Scattergram Command along with the subsidiary statistics produced by that command. Some of the independent variables seemed to have a relationship to the dependent variable but it did not appear to be linear in nature. Various methods of linear transformation were attempted on these variables, but were not successful enough to have the independent variable included in the regression equation. These were eliminated from further consideration.

D. Analysis and Transformation of the Dependent Variable

In the methodology section, the dependent variable to be used in the regression analyses was stated to be the total score of the

respondent as assigned by the interviewer. In the preliminary analysis of the study data, some problems were discovered which cast doubt on the usefulness of this variable. These problems had not been encountered in the pilot study. The first problem arose when the means of the respondent's total scores were examined when the file was split by interviewer. Significant differences in means were encountered between several of the groups. Further examination determined that the score given to the most likely to be hired candidate by one interviewer was less than the score given to the least likely to be hired by another interviewer. It would have been possible to develop a new variable based on the total score by using the distance from the mean of each interviewer, but further complications came to light. Two of the interviewers had given the same total score to all of the respondents they had interviewed. Even though there was no difference in total score between the five respondents in each interviewer's group, the interviewers ranked the respondents in order of preference as to hiring. A third interviewer had given a reasonable range of scores to her candidates but had ranked the third lowest score as the most likely candidate to be hired, and the highest scoring candidate as the least likely candidate to be hired. These problems with the score variable led to the decision that the rank assigned to the respondents by the interviewer was a more reliable measure. This, however, created some serious implications to this study.

The variable which reports the rank of a respondent in relation to the other four respondents in an interview section is only ordinal level at best. There were twelve sections, therefore there were 12

candidates who were ranked as 5 (most likely to be hired), 12 ranked 4, 12 ranked 3, 12 ranked 2, and 12 ranked 1 (least likely to be hired). The distance between the 1st and 2nd candidates was possibly not the same as that between the 2nd and 3rd, 3rd and 4th, or 4th and 5th candidates for a specific group. Further, the distance between the 1st and 2nd candidates for one specific group may not be the same as the 1st and 2nd candidates for another grouping.

Other methods of analyzing the data with an ordinal level dependent variable were investigated. Discriminant Analysis was found to be one alternative, but it would not give the relative importance of the independent (classifying) variables necessary for this research.

Further investigation of the possibility of using an ordinal level variable as the dependent variable led to the discovery of some disagreement on the possibility of doing so. Kmenta (1971, pp. 425-428) felt that regression was possible using a binary variable. Therefore, a new variable (HIRE) was created by recoding the original rank (IRANK) variable. The candidate most likely to be hired was coded as one (1), while all other candidates were coded as zero (0). This variable had the advantage of representing the actual situation fairly realistically. Either the candidate is hired or is not. The disadvantage of this method is that the usual way of determining the significance of a and b levels is not accurate and a different equation must be used for these calculations. These calculations would have to be done by hand as the computerized statistical package did not offer the facility to use binary variables.

Cohen and Cohen (1983, pp. 270-271) consider ordinal (rank) variables to be suitable for use as dependent variables in regression analysis. They do caution, however, that there is a problem getting linear relationships with a rank dependent. They suggest this can be remedied by recording the rank variable so as to create a normal distribution. This was done by creating another new variable, again based on IRANK. This new variable HIRE 2 took the most likely to be hired candidates (Rank 5) as one tail, and the least likely to be hired candidate (Rank 1) as the other tail, with the rest of the respondents (Ranks 2, 3, 4) as the middle bulge. These new groups were coded as (3) for the most likely to be hired, (2) for the middle values, and (1) for the least likely to be hired. The researcher is confident in this last dependent variable (HIRE2) but because there is controversy among statistical experts, the regressions reported in the next section will be reported with each of the possible dependent variables - TOTAL SCORE, IRANK, HIRE (binary of IRANK) and HIRE (normally distributed IRANK).

C. Regression Analysis of Findings

Regression analysis seeks to determine the proportion of variation of Y (dependent) variable which can be determined by the X (independent) variables.

The first step was to build the best equation possible from the independent variables of Set B, by regressing them against the dependent variable. This equation represents the best basic exploration of variation in the dependent variable using only the variables

which are usually believed to contribute to the decision to hire. Only the best basic equation is presented and it will be noted that not all of the variables of Set B were used in this final equation. During the development of this equation, all variables were originally included but were removed if they did not meet specific criteria. The primary criteria for exclusion of a specific variable was its failure to significantly raise the R^2 of the equation. It will be noted that the significance levels of some of the independent variables are far above the normally acceptable level of .05. The variables BACH, MASTRS and STLMDGR are a binary coded set which represents the post-secondary degree of the respondent. Even if one or two of the set are not significant, either the whole set or none of it can be included. Table 6 presents the equation which is the best estimate of variation in the dependent variable HIRE2, the normally distributed rank of the respondents. The optimal set of independent variables were regressed against each of the possible dependent variables.

When the Total Score (Eq. 1) was used as the dependent variable, severe collinearity was discovered between the communication ability variable (COMTOTR) and the Total Score. The result is the impressive R^2 while few of the other independent variables reach significance. Equations 2 and 3 were also not satisfactory due to the problems predicted by Cohen and Cohen. It was almost impossible to find any independent variable with a linear relationship with either GRADE or HIRE (the binary recoded). Equation 4, which uses the normalized rank of the respondents, seems to be the best estimating function.

Therefore, it is this equation which will be analyzed and will act as the basic equation for the hypothesis testing.

Table 6

Regression Equations Using Set B Variables

Dependent Variable	1 Total Score	2 Rank	3 Hire	4 Hire2
G.P.A.	-1.801 (.214)	.236 (.316)	.168 (.013)	.199 (.045)
COMTOTR	5.839 (.000)	.351 (.003)	.041 (.186)	.174 (.000)
EMPLYR	.889 (.030)	.171 (.011)	.058 (.002)	.074 (.009)
BACH	4.406 (.220)	.702 (.230)	.121 (.455)	.511 (.038)
MASTRS	.639 (.883)	.583 (.413)	.209 (.293)	.534 (.075)
STLMORE	11.366 (.045)	.703 (.440)	-2.76 (.279)	.358 (.346)
CONSTANT	25.594 (.025)	-2.272 (.215)	-1.510 (.004)	-1.297 (.051)
R^2 =	.66231	.34411	.36231	.43410
$\bar{R}^2$ =	.62408	.26986	.29011	.37003
F =	17.3244	4.63456	5.0186	6.7759
Sig F =	.0001	.007	.004	.0001

Using only variables from Set B, that is, information which is normally required on an application form or that which is normally rated by an interviewer, the variables used in equation 4 were found to be the most significant. The Grade Point Average (GPA), Communication (COMTOTR), years of employment experience (EMPLYR) and the university

degree held by the respondent (BACH, MASTRS, STLMORE) were found to explain 43 percent (R^2 = .43410) of the variation in the ranking of the respondent (HIRE2). Because the future steps of this study involve the addition of more variables to this basic equation, the adjusted R^2 ($\overline{R^2}$) is a better measure of goodness of fit and will be used in later discussion. For the basic equation, $\overline{R^2}$ reports that these variables explain about 37 percent of the variation of the dependent variable.

F. Hypothesis Testing

Using the basic equation 4, the hypotheses can now be tested. In order for a null hypothesis to be rejected, the increment in R^2 accounted for by the addition of a new variable to the basic regression equation must be significant. This significance is tested by the equation

where $R_y^2 \cdot AB$ = R^2 of equation of basic variable plus the new variable

$R_y^2 \cdot A$ = R^2 of equation of basic variables

K_A = number of independent variables in basic equation

K_B = number of independent variables in second equation

The equations to test the first three hypotheses are reported in Table 7.

Table 7

Regression Equations to Test Hypotheses 1, 2, and 3

	4*	5	6	7
G.P.A.	.199 (.045)	.209 (.038)	.196 (.034)	.179 (.052)
COMTOTR	.174 (.000)	.169 (.000)	.189 (.000)	.192 (.000)
EMPLYR	.074 (.009)	.079 (.007)	.088 (.001)	.085 (.002)
BACH	.511 (.038)	.508 (.050)	.508 (.027)	.507 (.027)
MASTRS	.534 (.075)	.481 (.119)	.343 (.225)	.362 (.200)
STLMORE	.358 (.346)	.339 (.374)	.271 (.442)	.323 (.359)
VAPPEAR		.026 (.445)		
VDRESS			.083 (.003)	
VCLOTH				.082 (.004)
CONSTANT	-1.297 (.091)	-1.471 (.068)	-1.880 (.013)	-1.769 (.017)
R^2 =	.43410	.44048	.52242	.52035
$\bar{R}^2$ =	.37083	.36616	.45813	.45579
F =	6.7759	5.0881	8.1259	8.05907
Sig F =	.0001	.0001	.0001	.0001

*Previously presented in Table 6.

Hypothesis 1: There is no significant relationship between success in the job interview and the appearance of the job applicant.

Using the test equation, $F(7,52) = .0749$. This does not meet the significance criteria of .05.

Therefore, Hypothesis 1: cannot be rejected.

Hypothesis 2: There is no significant relationship between success in the job interview and the dress of the job applicant.

Using the test equation, $F(7,52) = 1.215$. This is significant to better than .05.

Therefore, Hypothesis 2: rejected.

Hypothesis 3: There is no significant relationship between success in the job interview and the clothing of the job applicant.

Using the test equation, $F(7,52) = 1.182$. This is significant to better than .05.

Therefore, Hypothesis 3: rejected.

Hypothesis 4: There is no significant relationship in an interview and characteristics of the applicant considered discriminatory under the terms of the Individual's Rights Protection Act. These are:

a) Age - Using the test equation, $F(7,52) = .0291$. This does not meet the significance criteria of .05. Therefore, Hypothesis 4a: cannot be rejected.

b) Sex - Using the test equation, F(7,52) = .1349. This does not meet the significance criteria of .05. Therefore, Hypothesis 4b: cannot be rejected.

c) Physical Characteristics - Using the test equation, (F8,51) = .3598. This does not meet the significance criteria of .05.
Therefore, Hypothesis 4c: cannot be rejected.

d) Place of Origin

i) Alberta - Using the test equation, F(7,52) = .5212. This does not meet the significance criteria of .05.
Therefore, Hypothesis 4di: cannot be rejected.

ii) Canada - Using the test equation, F(7,52) = .3697. This does not meet the significance criteria of .05.
Therefore, Hypothesis 4dii: cannot be rejected.

e) Social Class - Using the test equation F(7,52) = .0350. This does not meet the significance criteria of .05.
Therefore, Hypothesis 4e: cannot be rejected.

f) Accent - Using the test equation, F(7,52) = .0289. This does not meet the significance criteria of .05.
Therefore, Hypothesis 4f: cannot be rejected.

g) Race - Using the test equation, $F(7,52) = .3404$. This does not meet the significance criteria of .05.
Therefore, Hypothesis 4g: cannot be rejected.

Hypothesis 5: There is no significant relationship between success in an interview and variables which measure the applicant's self-concept. These are:

a) Self-Esteem - Using the test equation, $F(7,52) = .0102$. This does not meet the significance criteria of .05.
Therefore, Hypothesis 5a: cannot be rejected.

b) Body Cathexis - Using the test equation $F(7,52) = .0232$. This does not meet the significance criteria of .05.
Therefore, Hypothesis 5b: cannot be rejected.

c) Body Boundary - Eliminated from experimental design.

Hypothesis 6: There is no significant relationship between success in an interview and specific characteristics of an applicant's dress. These are:

a) Fit of Applicant's Clothes - Using the test equation, $F(7,52) = .0420$. This does not meet the significance criteria of .05.
Therefore, Hypothesis 6a: cannot be rejected.

b Condition of Applicant's Clothes - Using the test equation, $F(7,52) = .2081$. This does not meet the significance criteria of .05.

Therefore, Hypothesis 6b: cannot be rejected.

c Apparent Cost of Applicant's Clothes - Using the test equation, $F(7,52) = .1181$. This does not meet the significance criteria of .05.

Therefore, Hypothesis 6c: cannot be rejected.

d Fashionability of Applicant's Clothes - Using the test equation, $F(7,52) = .0309$. This does not meet the significance criteria of .05.

Therefore, Hypothesis 6d: cannot be rejected.

e Grooming of Applicant - Using the test equation, $F(7,52) = .0541$. This does not meet the significance criteria of .05.

Therefore, Hypothesis 6e: cannot be rejected.

f Formality of Applicant's Clothes - Using the test equation, $F(7,52) = 2.2390$. This is significant to better than .05.

Therefore, Hypothesis 6f: rejected.

Although the primary goals of this study have been achieved by the testing of the first three hypotheses, a secondary goal of

identifying any other attributes of the respondents which affect their success at a job interview was pursued. Although the dress and clothing were found to be significant to the success of the applicant, the scores for these variables were the result of the judgment of the viewer as to the appropriateness for the situation. Therefore, it was decided to develop a quantitative score for clothing which would eliminate any personal judgment. The wide variation in the clothing worn to the practice interviews by the respondents made this very difficult. Also, because the relatively small size of the sample precluded the splitting of the sample on the basis of sex, the quantitative scale must be applicable to both male and female respondents. The concept of formality of dress was chosen. For a female respondent to be considered formally dressed, she must be wearing a skirted outfit. For a male respondent to be considered formally dressed, he must be wearing a tie. Therefore, a female respondent wearing a skirted outfit (these included blouse and skirt, a dress, a skirted suit) and a male respondent wearing a tie (whether or not a jacket was present) were coded as (1) under the new variable FORMALTY. Respondents who did not meet the basic dress criteria for their sex were coded as zero. After this coding was achieved, it was noted that 33 or 55% of the respondents were considered to be formally dressed (skirt if female, tie if male) and that 27 or 45% of the respondents were considered to be casually dressed (bifurcated garment if female, no tie if male). This new variable (FORMALTY) was inserted into the basic equation (4) and the regression performed. The increment in the R^2 for this new equation yielded an F value of 2.239 with a significance level

of better than .01. Non-parametric correlation of FORMLTY to the viewer's rating of Dress and Clothing achieved Kendall correlation coefficients of .7266 ($p < .001$) and .7375 ($p < .001$) respectively. Because of its significance to the regression equation and because it does not rely on the judgment of the individual viewer, FORMLTY is used in the remaining analyses.

The final regression to be presented is the one which best explains the variation in dependent variable and was free to use any of the variables for which this study had quantification. This final equation is presented in Table 8, along with the original basic equation and the basic equation plus FORMLTY.

The process of building this last equation was long and sometimes frustrating. The results are somewhat unsettling. The new variables which were included in the final equation include another binary set (UNDERWT, OVERWT) which represent the nominal variable of body stature (Heavy, Normal, Thin) which was developed from the height and weight information supplied by the respondent in the resume. ESTEEM is the score achieved on the Rosenberg Self-Concept Scale, since the lower the score, the higher the self-esteem; this accounts for the negative B value in the equation. The most unsettling variable to be included is that of race. This was coded so that caucasians were (1) and all others were (0). The significance of the race of the respondent to success in the job interview situation was also noted in the pilot study. Hegedus (1984) has noted that interviewers favour those similar to themselves in race. This would seem to be a polite way of saying that they do not choose individuals of races different from

themselves. It should also be noted that the consideration of attributes such as body stature and race are in contravention of the Individual's Rights Protection Act of Alberta and the Federal Charter of Rights and Freedoms.

This final regression equation will be used to test Hypothesis 7.

Hypothesis 7: No combination of attributes contribute significantly to the ranking of the job applicants by the interviewer.

Using the test equation, $F(11,80) = 3.4613$. This is significant to better than .001.

Therefore, Hypothesis 7: rejected.

Table 8

Regression Equations to Test Hypotheses 6f and 7

	4*	8	9
GPA	.199 (.045)	.195 (.025)	.234 (.005)
COMTOTR	.174 (.000)	.178 (.000)	.128 (.001)
EMPLYR	.074 (.009)	.088 (.001)	.061 (.009)
BACH	.511 (.038)	.552 (.011)	.656 (.001)
MASTRS	.534 (.075)	.472 (.072)	.239 (.324)
STLMORE	.358 (.346)	.276 (.403)	.336 (.261)
FORMLTY		.493 (.000)	.590 (.000)
OVERWT			.464 (.005)
UNDERWT			.199 (.179)
DRACE			.561 (.002)
ESTEEM			-.122 (.029)
CONSTANT	-1.297 (.091)	-.645 (.343)	-.722 (.240)
R^2 =	.43410	.57792	.70071
$\bar{R}^2$ =	.37003	.52110	.63212
F =	6.7759	10.17139	10.21619
Sig F =	.0001	.0001	.0001

*Previously presented in Table 5

G. Discriminant Analysis of Variables Used in Regression Analysis

As stated previously, discriminant analysis was seen as an alternative method of examining the value of the independent variables as predictors of membership in the ranks assigned to them by the interviewers. Of interest to this study was the facility of this routine to produce a classification of the predicted group membership as compared to the actual group membership reported.

The analysis was accomplished by specifying the group membership according to the ranks assigned by the interviewers. There were twelve in group 1, twelve in group 2, twelve in group 3, twelve in group 4, twelve in group 5. All the independent variables in the final equation (9) were allowed to enter the program. The routine stated that the 75% of the cases to be correctly classified; with 91.7% of the most likely to be hired (group 5) and 91.7% of the least likely to be hired (group 1) to be correctly classified. There was the greatest mis-grouping between the 2nd, 3rd, and 4th ranked candidates.

The discriminant analysis was run again, this time using the normalized ranked variable HIRE2 as the grouping variable. This meant there were twelve in group 1, thirty-six in group 2 and twelve in group 3. This analysis resulted in the package achieving an overall 83.3% of "grouped" cases correctly classified, with the most likely to be hired group at 91.7% and the least likely to be hired group correctly classified at 100%. It should be noted that due to the small membership in each of these two groups, the difference between 91.7% and 100% of correct classification is explained by only one individual mis-grouped.

The results of the discriminant analysis strengthens the previous results, giving increased confidence in the predictive quality of the independent variables. Although the relative strength of each independent variable is not reported in the discriminant analysis, it is noteworthy that the variables which achieved the highest significance in discriminating the group membership were the race of the respondent, the score on the Rosenberg Self-Concept Scale, the formality of dress of the respondent and the years of employment experience of the respondent.

H. Differences Between Most Likely - Least Likely to be Hired Respondents

This section will compare the features of the respondents who had the highest probability of being hired to those with the lowest probability. The basic demographic features and attributes used in the regressions and discriminant analysis are summarized in Table 9.

Table 9

Comparison of Most Likely - Least Likely to be Hired Groups

	Whole Sample	Most Likely	Least Likely
Status			
- student	45	8	10
- alumni	9	2	-
- non-student	6	2	2
Age - mean	25.17	28.58	23.33
Sex			
- male	28	4	6
- female	32	8	6
Body Stature			
- Underweight	12	4	2
- Normal	38	3	9
- Overweight	10	5	1
Place of Origin			
- Alberta, city	21	7	4
- Alberta, town	14	3	-
- Alberta, rural	6	-	2
- Ontario-Quebec	5	1	-
- Europe	5	1	-
- Middle East	1	-	-
- Orient	7	-	6
- South America	1	-	-
Social Class			
- Upper	9	2	3
- Upper-middle	9	1	1
- Middle	21	3	5
- Lower-middle	16	4	3
- Lower	5	2	-
Grade Point Average - mean	6.8 (6 miss.)	7.4 (2 miss.)	6.6 (2 miss.)
Education Level			
- No Post-Secondary Degree	6	2	2
- Bachelor's (by April 1984)	44	7	9
- 1 Master's (by April 1984)	7	3	1
- More than 1 Master's	3	-	-
Years of Post-Secondary Study - mean	4.05	4.25	3.75

	Whole Sample	Most Likely	Least Likely
Major			
- Arts	6	1	2
- Business	19	4	4
- Education	11	3	2
- Engineering	5	-	-
- Home Economics	5	-	1
- Library Science	1	-	-
- Medicine	1	-	-
- Pharmacy	2	-	-
- Rehab. Medicine	2	2	-
- Science	2	-	1
- Non-Student	6	2	2
Years of Experience - mean	2.7	4.9	1.5
Resume			
- Personal resume presented	16	5	2
- No resume	44	7	10
SETOTAL - mean	79.7	83.4	69.3
ESTEEM - mean	2.13	2.08	2.3
Cathexis - mean	146.08	151.08	136.75
Accent			
- Accent discerned	10	-	1
- No accent	40	10	9
- Missing	10	2	2
Appearance Score - mean	5.4	5.0	4.5
Grooming Score - mean	6.3	6.0	5.6
Clothing - mean	5.8	6.5	4.9
Dress - mean	5.7	6.4	4.9
Formality of Clothing			
- Formally dressed	33	10	4
- Casually dressed	27	2	8
Race			
- White	52	12	7
- Non-white	8	-	5

Examination of this data leads to the development of some generalizations about the differences between the two groups. The status of the respondent, that is student vs. non-student, and the sex of the respondent do not appear to be significant. The respondents most likely to be hired appear to be older, $t(16) = 2.91$, $p<.01$, have more employment experience, $t(12) = 3.12$, $p<.01$, have a higher Grade Point Average, $t(15) = 2.41$, $p<.05$, and have better communication ability, $t(18) = 4.22$, $p<.001$, than those least likely to be hired. Although the most likely group exhibits great variation in the normality of body structure when the Body Cathexis scores are examined, it appears that they are more satisfied with their bodies than the other group. Possibly it is not the presence of excess weight (or lack of adequate weight) but the acceptance of one's body structure which is important.

The group most likely to be hired is below average in appearance and grooming, as is the least likely group. This would have been further investigated if the sample had been larger to allow splitting by sex. Cash and Janda (1984) found that, while attractiveness is an advantage for male job seekers, it is definitely a disadvantage for females. The mean of the most likely group being below the mean of the total sample combined with the majority of top ranked candidates being female may support this, however, no firm conclusion may be made in this regard. The clothing and dress appropriateness scores of the most likely group were higher than those of the whole sample and of the least likely, however, these differences were not significant. The group most likely to be hired were more likely to be formally dressed,

$t(15) = 2.41$, $p<.05$. The sensitive area of race is again evident in that no respondent who was not caucasian was in the most likely group, while 5 or 63% of the non-caucasian respondents were ranked as least likely to be hired. Racial differences between the two groups was significant, $t(11) = 2.80$, $p<.05$.

Since we were now dealing with more manageable numbers, the clothing worn by the most likely and least likely groups were analyzed and reported. The two groups were split by sex of the respondents. The breakdown of these are presented in Table 10.

Table 10

Comparison of Clothing of Most Likely - Least Likely to be Hired Groups

	Most Likely Group	Least Likely Group
Female		
Suit - chanel jacket	1 (teal) 1 (wine)	
- blazer jacket	1 (beige)	1 (navy)
Jacket with skirt (not matching)	1 (grey tweed jacket, black skirt) 1 (camel jacket, brown skirt)	
Dress	1 (stripe-beige, burgundy) 1 (solid blue)	
Blouse and skirt	1	
Dress slacks		2 (both brown tweed)
Blue jeans, with either blouses or T-shirts		3
Male		
Suit (with tie)		1 (grey) 1 (navy pin stripe)
Sport jacket and slacks (with tie)	1	1
Sport jacket and slacks (no tie)	1	
White shirt, black dress slacks, tie	1	
White shirt, brown dress slacks, brown V-neck pullover	1	
Jeans with sports shirt		3

All of the female respondents in the most likely to be hired group (n=8) wore skirted outfits. The blouses worn by this group were either closed at the neck or designed with a high neckline. If earrings were present, they were of the stud type. All wore natural coloured hose and low-heeled pumps.

All of the male respondents of the most likely group (n=4) wore dress slacks and shirts. Two wore sports jackets, one of which had no tie. One respondent wore a tie with a white shirt but had no jacket. The last respondent did not have a tie, but wore a V-neck pullover.

Only one of the female respondents (n=6) in the least likely to be hired group wore a skirted outfit, a navy wool suit. Two wore brown tweed dress slacks. The last three were wearing jeans.

Two of the male respondents (n=6) in the least likely group wore suits and one wore a sports jacket and slacks. These three also had ties and dress shirts. The remaining three wore blue jeans and sports shirts open at the neck.

Further investigation of the original rating sheets of the viewer disclosed that the female respondent in the navy suit and the male respondent in the navy pin stripe suit had received very high scores. These respondents eventually ended up in the least likely to be hired group. Further investigation led to a possible explanation. The four respondents in the least likely to be hired group, one female and three males, had one attribute in common besides being well dressed. All were non-caucasian. If race was responsible for their low ranking, this overrode all other factors. It is believed that this was the case. It is also apparent that, if the non-caucasian respondents were removed from the sample, the significance of clothing, dress and formality of dress would increase.

V. SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

A. Summary

The purpose of this study was to establish whether or not clothing has an investment component, rather than being solely consumption. It was thought that, if a mode of dress enhanced the capability of the individual to attain employment (and hence monetary benefit), then the expenditure on clothing must be accepted as investment.

A voluntary sample of 60 individuals consisting of currently registered students, alumni, and non-academic staff from the University of Alberta submitted to a mock job interview. The interviews and rankings of the respondents were done by professional interviewers. The respondents were scored independently by a hidden viewer and a listener for various behavioral and performance attributes.

After the interview, the respondents were given the Rosenberg Self-Concept Scale and the Body Cathexis Scale. The data were analyzed for correlation among variables. Significant correlation was found between the scores of the interviewer and the viewer, but not between those of the interviewer and the listener.

A regression analysis was performed using the independently gathered variables which reflected those attributes generally assumed to determine the success of a job applicant in the interview. Years of employment experience, grade point average, communication ability, and university degrees held by the respondent together explain only about 43% of the variation in the ranking of the respondents by the interviewers. By introducing selected independent variables into this basic

equation, it was found that the respondent's dress and clothing were both significant in the ranking of the respondents, but that appearance of the respondent was not.

A final regression equation was constructed which allowed the inclusion of any of the variables which had been collected during the study. Besides the years of employment, grade point average, communication ability and university degrees held, which had been found significant earlier, the respondent's body structure, self-esteem, race, and the formality of his dress explained over 70% of the variation in the ranking of the interviewees by interviewers.

Discriminant analysis was run using the independent variables of the last equation. It was found that these variables would predict the membership in the group most likely to be hired with an accuracy of 91.7% and membership in the group least likely to be hired with an accuracy of 100%.

It is predicted with confidence that an individual's probability of success in a job interview increases if they are caucasian, if they have a bachelor's degree, and if they are dressed formally (a female must wear a skirt; a male should wear a tie). Their probability of success also increases as their years of previous employment, communication ability and positive self-esteem increases.

The probability of an individual being successful in a job interview significantly decreases if he/she is not caucasian, no matter how he/she is dressed. It appears a woman, no matter what her race, wearing either slacks or jeans, places herself at a distinct disadvantage. A male wearing jeans is also unlikely to achieve success.

Although the interviewers were unaware that the purpose of the interviews was to determine the importance of clothing and other characteristics of the respondents which could be perceived visually, some made comments on the rating forms which relate to these attributes. These are summarized in Appendix VII, along with the ratings which they assigned to that respondent.

B. Conclusions

Interviewers are influenced by the visual clues given them by job applicants perhaps more than by what they hear or what they read on an application form. The appropriateness of the clothing worn by the applicant to a job interview and the grooming of that applicant in combination with appropriate clothing significantly affects the ranking of the applicant by the interviewer. Although it does not appear that the applicant's dress must adhere to the extreme codes set forth by authors like Molloy (1975, 1977) and Bixler (1984), applicants would certainly give themselves a benefit by approximating this standard of dress rather than dressing casually. Women, in particular, are penalized by failing to wear a skirted outfit. It is apparent that the writers who advise women never to wear slacks to an interview are correct.

The significant correlation between the clothing of the applicant and the scores given to other attributes such as attitude, confidence and interpersonal skills by both the interviewer and the viewer suggests that there is some generalization from the visual information (i.e. clothing, grooming, race) to that which generally requires

further judgment. Better dressed applicants are seen as more confident and as having better interpersonal skills and a better attitude. This was also apparent with individuals who were not caucasian. The scores given by the interviewers were uniformly lower for non-white respondents. The lower marks given to such things as attitude, confidence, etc. to respondents who either do not meet the dress criteria of the interviewer or because the applicant is of a different race suggests that the discrimination may be hidden by the candidate's uniformly low scores.

There are two acts of government which seek to protect the individual from discrimination, the Federal Charter of Rights and Freedoms and the Alberta Individual Rights Protection Act (IRPA). Under the IRPA, it is illegal to discriminate on the basis of race, religious beliefs, color, age, sex, physical characteristics, ancestry, or place of origin. In practice, what this has meant is the elimination of questions on application forms which would require the individual to divulge this information. The fact remains that the personal interview is almost universal and the interviewer can perceive most of the attributes on sight. In fact, some can be perceived from the application form even without seeing the applicant. The name gives strong clues as to the sex and ancestry, and perhaps race. From the date of high school graduation, an interviewer can deduce a rough approximation of age. Researchers have demonstrated that individuals can perceive social class (Holt, 1954; Rosencranz, 1962), age, sex (Horn and Gurel, 1981), social and political attributes (Buckley and Roach, 1974) solely from visual cues. Certainly race, color and

physical characteristics are noted visually. These findings, combined with the facility of the interviewer to uniformly lower an applicant's score, disguises any discrimination. It does not eliminate it.

On the basis of this study, it is apparent that more than just the "legal" attributes of applicants influence the candidate's probability of success in a job interview. The final conclusion relates directly to the research problems studied. The dress of an interviewee is significant to the individual's success in a job interview. Although communication ability and years of employment experience seem to be more important than clothing, clothing is more important than the grade point average or the degrees held by the applicant in the ranking of job applicants. The formality of dress (female wearing skirted outfits, males wearing ties), however, is more important to the ranking of candidates than is any other variable. It must be cautioned that there was a large portion of inappropriately dressed interviewees. For a real job interview situation, it is possible that the variation in dress may be smaller, therefore, the relative contribution of style of dress would be reduced.

C. Limitations of Findings

1. It is recognized that in an economic sense, both in time and money, this research design was overly ambitious. It is also recognized that social science research methodology, as it deals with human beings, is not an exact science. In both these senses, findings from the analysis of data are limited. Although the fit of the

multivariant models analyzed was relatively good, there was indication that other factors might have been added.

2. The sample may not be representative of all job-seekers. Bias is a real possibility with volunteer samples.
3. The interviewers may not be representative of all personnel interviewers.

D. Implications

The significance of clothing and dress to the ranking of job applicants leads to the deduction than an expenditure on a suitable outfit for a job interview can be considered an investment. An individual invests with the expectation of accruing some return on the investment and seeks to maximize the rate of return. Given that the investment in a university education is quite substantial (fees, foregone income, etc.), the return on investment must also be high to supply an adequate rate of return. The expenditure on clothing and dress for an employment interview is relatively small when compared to the expenditure incurred in obtaining a university degree. Therefore, the rate of return is substantially higher. It is also suggested that the rate of return on improving one's communication ability would also be substantial. If an applicant is not seriously considered, or his other qualifications overlooked because of the poor impression given by inappropriate clothing or his inability to communicate adequately, then previous expenditures on such things as education are wasted.

E. Recommendations

The recommendations are divided into two parts:

1) improvements in research methodology
2) future research

Improvements in Research Methodology

Since much of the preparatory work for this study was associated with the development and selection of measures, the following improvements are suggested:

1. The respondents in this study may be atypical of the population of job applicants. A sample comprising respondents from another employment sector may contribute to the validity of the study.
2. The interviewers for this study may be atypical of the population of employers. A sample comprising interviewers from another employment sector might contribute to the validity of this study.
3. An instrument needs to be developed which would measure quantitatively the clothing of male and female respondents.

Future Research

Some of the recommendations for future research are related to the current project and others are an outgrowth of it.

1. It would be desirable to replicate this study with male interviewers. If similar results were obtained, the findings could be generalized to a much wider pouplation. The validity would be improved to further substantiate the findings.

2. It would be desirable to replicate this study with non-caucasian interviewers. If similar results were obtained, the findings could be generalized to a much wider population. The validity would be improved to further substantiate the findings.
3. It would be desirable to replicate this study with respondents from a different employment sector. It may be that the relative importance of clothing and appearance attributes are not consistent across all employment situations.
4. There seems to be an indication that acceptable clothing standards are different for male and female applicants. Further research is warranted.
5. Although the employment interview situation was used in this study to investigate the investment component of clothing, the investment aspect of clothing may be present in other life situations. It would be desirable for another study to investigate other such situations. If similar results were obtained, the findings could be generalized to a much wider population. The validity would be improved to further substantiate the theory.
6. This initial exploration of clothing as investment in human capital considered only monetary benefits which accrue to the individual. It would be desirable to investigate non-cash benefits accruing to an individual because of mode of dress. This proposed research has the greatest potential benefit for groups with special needs, such as the elderly and the disabled.

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Appendix I

Information Packet for Volunteers

Dear Job Applicant:

Thank you for your interest in this project. This is a research project which aims to study the job interview and personnel selection process. In return for your participation in a practice interview, you will receive a report of your strong points which impressed the interviewers and an indication of those areas which may need a little work.

The process you are to follow is:

1. Fill out the Resume forms completely. You will notice that some of the questions on Page 1 of the Resume are not usually found on a job application. We need this demographic data for our analysis. Page 1 will not be seen by the interviewer; he/she will receive only the remaining page, so the information you provide on Page 1 will not enter into the interviewer's evaluation.
2. Sign the Release Form (after reading it, of course).
3. Return the Resume and Release form to the researcher.
4. You will be contacted by phone to arrange an interview time.
5. To get the maximum benefit from the practice interview, please prepare for the interview as you would for a real job interview. This means you should dress as you would for a real interview, be punctual, etc.
6. The interview will be as realistic as possible. The interviewers will rate your performance just as they would if they could really offer you a job.

7. As is commonly done in the business world, after the interview you will be given a battery of psychological tests. These tests are quite short and painless.
8. After the data has been analyzed, you will receive the report of how you did at the practice interview.

Thank you for your co-operation

Resume

Name: _____

Address: _____

_____

_____

Phone: _____

Birthdate: _____ Sex: M F Height: _____ Weight: _____

Are you currently a student at this University? Yes __ No __

Geographic location where you have lived the majority of your life:

_____

Occupation of the head of your household when you were growing up:

_____

Highest level of education completed by household head:

_____

University of Alberta G.P.A. (if a student): _____

Career Goal: _____

Applicant No: _____

Applicant Number: _____

Name you wish the interviewer to call you: _____

Education

Trade, Tech., Business, Other

Education	Course	Started	Left
_____	_____	19___	19___
_____	_____	19___	19___

University or College

Institution	Major	Started	Left
_____	_____	19___	19___
_____	_____	19___	19___
_____	_____	19___	19___

Degree(s) and Date Earned/Expected _____

Employment History

Employer	Position/Duties	Started	Left
_____	_____	19___	19___
_____	_____	19___	19___
_____	_____	19___	19___
_____	_____	19___	19___

Release Form

I realize I will be participating in a research project which requires that I provide certain personal data. I agree to allow this data to be used by the researchers for the purposes of analysis or publication realizing that it will be held in the strictest confidence and that my identity will be protected.

I certify that the statements made by me on the application are true and complete. I agree to co-operate with the procedure set down by the researchers knowing that the experimental procedure has passed the inspection of an Ethical Review Committee at the University of Alberta.

I realize I am free to withdraw from this study at any time.

Signature _____

Name (print) _____

Date _____

Appendix II

Interviewer Script and Score Sheet (Pilot Study)

Applicant #____

Interviewer Script

Part A: Warm-up (not scored)

To get started, why don't you tell me about yourself?

Part B: Knowledge

Give copy of question 1 to applicant.

1. Answers to question 1.

1. (e) 2. (a) 3. (c) 4. (e) 5. (e)

Give 2 points for each correct answer.

Score for Question #1 _____

Give copy of question 2 to applicant.

2. Answers to question 2.

Answer - (b)

Calculations:

Let C = F = X

Then X = 5/9 (x - 32)

9X = 5X - 160

4X = -160

X = -40

Give 6 points for correct answer (no calculations shown).

Give 10 points for correct answer plus calculations.

Give partial marks for calculation but incorrect answer.

Give zero for no answer / no calculation.

0 1 2 3 4 5 6 7 8 9 10

TOTAL POINTS FOR PART B: _____

Part C: Abilities

3. Suppose I was an employee of yours . . . you were some kind of supervisor . . . and I was slow in doing my job. How would you go about motivating me to put forth my best effort?

0 1 2 3 4 5 6 7 8 9 10
unsatisfactory fair good excellent

4. You will be required to prepare periodic reports on your activities and project what you intend to accomplish in the upcoming period. How would you go about doing this?

0 1 2 3 4 5 6 7 8 9 10
unsatisfactory fair good excellent

TOTAL POINTS FOR PART C: _____

Part D: Communication Skills

5. What courses do you like best? Why?

6. Have you ever changed your major field of interest while in University? Tell me your reasons.

7. What are your long-term career goals?

ARTICULATION AND PRONUNCIATION (Clarity of Speech)

0 1 2 3 4 5 6 7 8 9 10
unsatisfactory fair good excellent

GRAMMAR (Usage)

0 1 2 3 4 5 6 7 8 9 10
unsatisfactory fair good excellent

FLUENCY (Understood and responded appropriately)

0	1	2	3	4	5	6	7	8	9	10
unsatisfactory				fair		good				excellent

TOTAL POINTS FOR PART D: _____

CONCLUSION OF THE INTERVIEW

Thank the applicant and take him/her to the room where a questionnaire has to be filled out. Introduce him/her to Melissa and return to finish the rating form. When you are ready, come to the reception area and pick up your next applicant.

Part E: Personal Suitability

8. How motivated do you feel the applicant is?

0	1	2	3	4	5	6	7	8	9	10
low					average					high

9. How would you rate the applicant's interpersonal skills?

0	1	2	3	4	5	6	7	8	9	10
low					average					high

10. What is the applicant's attitude?

0	1	2	3	4	5	6	7	8	9	10
low					average					high

11. How confident is the applicant?

0	1	2	3	4	5	6	7	8	9	10
low					average					high

TOTAL POINTS FOR PART E: _____

THESE NEXT QUESTIONS ARE UNSCORED AND SHOULD NOT ENTER INTO YOUR SCORING OF THE APPLICANT'S PERFORMANCE.

Did the applicant exhibit any mannerism or behavior you found annoying, disturbing, or inappropriate for the occasion? List.

What was the most positive attribute of the applicant?

The most negative?

Would you like to work with this applicant? Yes ___ No ___

Applicant #____

QUESTION ONE

Each of these questions consists of two capitalized words which have a certain relationship to each other, followed by five lettered pairs of words. Choose the lettered pair of words which are related to each other in the same way as the words of the capitalized pair are related to each other.

1. ARROW : BULLET

a) pistol : rifle
b) sock : stocking
c) glass : window
d) tie : bow
e) stagecoach : plane

2. RAT : TAR

a) deal : lead
b) mouse : cheese
c) trap : tap
d) book : booklet
e) road : highway

3. BIRD : HAND

a) cage : freedom
b) darkness : dawn
c) stitch: time
d) meal : feast
e) campus : riot

4. BUTTER : POUND

a) margarine : package
b) flattery : insult
c) food : scale
d) grocery : supermarket
e) wood : cord

5. SEW : SOUR

a) seek : lose
b) crack : mend
c) slow : sweater
d) needle : wheedle
e) glow : glower

QUESTION TWO

The relationship between the Celsius (C) and the Fahrenheit (F) temperature readings is given by the formula:

$$C = 5/9 (F - 32)$$

At what temperature will the Celsius and Fahrenheit readings be identical? SHOW YOUR CALCULATIONS.

a) -60 degrees

b) -40 degrees

c) 0 degrees

d) 24 degrees

e) 32 degrees

Appendix III

Viewer's Evaluation

Applicant #_____

Viewer's Evaluation

1. What is your first impression of the applicant's appearance?

2. Starting at the top, list every garment and accessory worn/carried by the applicant. Note colour, fabric and style of the articles.

3. Fit of the applicant's clothes

   0 1 2 3 4 5 6 7 8 9 10

4. Condition of the applicant's clothes (press, repair, cleanliness, etc.)

   0 1 2 3 4 5 6 7 8 9 10

5. Apparent cost of applicant's clothes.

   0 1 2 3 4 5 6 7 8 9 10

6. Fashionability of applicant's clothes.

   0 1 2 3 4 5 6 7 8 9 10

7. Grooming of the applicant.

   0 1 2 3 4 5 6 7 8 9 10

8. Of what racial background do you perceive the applicant to be?

   a) White
   b) Oriental
   c) Black
   d) Asian
   e) Native Indian
   f) Non-white, but unable to distinguish

9. Check off any conditions/characteristics noted.

___ Dandruff	___ Unpolished shoes
___ Run-over heels	___ Unsuitable hairstyle
___ Bad/crooked teeth	___ Overweight
___ Handicapped	___ Gay
___ Tall	___ Short
___ Hirsute	___ Unkempt hair
___ Unshaven	___ Underweight
___ Birthmark	___ Acne

Other _____

10. Do you think the applicant's body language gave:

0	1	2	3	4	5	6	7	8	9	10
strongly negative messages										strongly positive messages

11. Note any mannerisms or behavior you found distracting or inappropriate for the occasion.

12. Attitude

0	1	2	3	4	5	6	7	8	9	10

13. Interpersonal skills

0	1	2	3	4	5	6	7	8	9	10

14. Confidence

0	1	2	3	4	5	6	7	8	9	10

15. How appropriate for a job interview was the applicant's

Behavior

0	1	2	3	4	5	6	7	8	9	10

Clothing

0	1	2	3	4	5	6	7	8	9	10

Grooming

0	1	2	3	4	5	6	7	8	9	10

Dress

0 1 2 3 4 5 6 7 8 9 10

16. Of the ___ applicants interviewed for this position, I would rank this candidate as number ___.

Appendix IV

Revised Interviewer Script and Score Sheet

Interviewer Script

1. What kinds of jobs are you considering?

Ability to create and innovate

2. What have you learned from some of the jobs you have held?

Ability to analyze and evaluate

3. How did your previous employers treat you?

Attitude

4. What qualifications do you have that make you feel you will be successful in your field?

Ability to organize
Confidence

5. Suppose I was an employee of yours . . . you were some kind of supervisor . . . and I was slow in doing my job. How would you go about motivating me to put forth my best effort?

Ability to direct
Motivation

6. What are your long-term career plans? Explain how you will achieve them.

Ability to plan
Motivation

Ability to communicate - deduced from all questions.

At the conclusion of an interview session (2 hours), please place the candidates in order and number them in order of preference.

i.e. 1 = most desirable
2 = least desirable

Applicant #____

Rating Form

1. Ability to create and innovate

   0 1 2 3 4 5 6 7 8 9 10

2. Ability to analyze and evaluate

   0 1 2 3 4 5 6 7 8 9 10

3. Ability to organize

   0 1 2 3 4 5 6 7 8 9 10

4. Ability to direct

   0 1 2 3 4 5 6 7 8 9 10

5. Ability to plan

   0 1 2 3 4 5 6 7 8 9 10

6. Ability to communicate

   0 1 2 3 4 5 6 7 8 9 10

7. Interpersonal skills

   0 1 2 3 4 5 6 7 8 9 10

8. Confidence

   0 1 2 3 4 5 6 7 8 9 10

9. Attitude

   0 1 2 3 4 5 6 7 8 9 10

10. Motivation

    0 1 2 3 4 5 6 7 8 9 10

Did the applicant exhibit any mannerism or behavior you found annoying, disturbing or inappropriate for the occasion? List.

What was the most positive attribute of the applicant?

The most negative?

Would you hire this applicant? Yes ___ No ____

Appendix V

Listener's Score Sheet

Listener's Evaluation

1. Articulation and pronunciation (clarity of speech)

1	2	3	4	5	6	7	8	9	10
unsatisfactory									outstanding

2. Grammar (usage)

1	2	3	4	5	6	7	8	9	10

3. Fluency (understood questions and responded appropriately)

1	2	3	4	5	6	7	8	9	10

4. Conciseness

1	2	3	4	5	6	7	8	9	10

5. Logic

1	2	3	4	5	6	7	8	9	10

6. Accuracy

1	2	3	4	5	6	7	8	9	10

7. Volume

1	2	3	4	5	6	7	8	9	10
extremely soft									extremely loud

8. Does the applicant have an accent?

0	1	2	3	4	5
no	slight				very heavy

9. What type of accent? _____

10. Attitude

1	2	3	4	5	6	7	8	9	10

11. Interpersonal skills

1	2	3	4	5	6	7	8	9	10

12. Confidence

1	2	3	4	5	6	7	8	9	10

Of the ___ applicants interviewed in this session, I would rank this candidate as number ___.

Appendix VI

Instruments Used

Rosenberg Self-Concept Scale

In this section, you are asked to indicate how you feel about yourself by responding to each statement with one of the four possible responses:

SA - strongly agree
A - agree
D - disagree
SD - strongly disagree

Please check the responses which best indicate your attitude to each statement.

	SA	A	D	SD
1. I feel that I'm a person of worth, at least on an equal basis with others.				
2. I feel that I have a number of good qualities.				
3. All in all, I am inclined to feel that I am a failure.				
4. I am able to do things as well as most other people.				
5. I feel I do not have much to be proud of.				
6. I take a positive attitude toward myself.				
7. On the whole, I am satisfied with myself.				
8. I wish I could have more respect for myself.				
9. I certainly feel useless at times.				
10. At times, I think I am no good at all.				

Body Cathexis Scale

Directions: Consider each item listed and circle the letter which best represents your feelings according to the following scale.

A. Have strong feelings and wish change could somehow be made.
B. Don't like but can put up with.
C. Have no particular feelings one way or the other.
D. Am satisfied.
E. Consider myself fortunate.

1. Hair ..... A B C D E
2. Facial complexion . A B C D E
3. Appetite ..... A B C D E
4. Sex ..... A B C D E
5. Nose ..... A B C D E
6. Fingers ..... A B C D E
7. Wrists ..... A B C D E
8. Breathing ..... A B C D E
9. Waist ..... A B C D E
10. Energy level ..... A B C D E
11. Back ..... A B C D E
12. Ears ..... A B C D E
13. Exercise ..... A B C D E
14. Ankles ..... A B C D E
15. Neck ..... A B C D E
16. Shape of head ..... A B C D E
17. Body build ..... A B C D E
18. Profile ..... A B C D E
19. Height ..... A B C D E
20. Age ..... A B C D E
21. Width of shoulder . A B C D E
22. Arms ..... A B C D E
23. Chest ..... A B C D E
24. Eyes ..... A B C D E
25. Digestion ..... A B C D E
26. Hips ..... A B C D E
27. Skin texture ..... A B C D E
28. Lips ..... A B C D E
29. Legs ..... A B C D E
30. Teeth ..... A B C D E
31. Forehead ..... A B C D E
32. Feet ..... A B C D E
33. Sleep ..... A B C D E
34. Voice ..... A B C D E
35. Health ..... A B C D E
36. Knees ..... A B C D E
37. Posture ..... A B C D E
38. Face ..... A B C D E
39. Weight ..... A B C D E
40. Sex (male or female) ..... A B C D E
41. Chin ..... A B C D E
42. Back view of head . A B C D E
43. Trunk ..... A B C D E

Appendix VII

Comments of Interviewers Regarding Appearance of Applicants

"Neat, clean, friendly - speaks with slight accent, PREGNANT"	RANK 1
"Neatly dressed, good manners"	RANK 4
"Very attractive in appearance and manner"	RANK 4
"Appearance very good"	RANK 5
"She was not dressed appropriately, but disarmed me by admitting it"	RANK 1
"Has good appearance"	RANK 5
"Casually dressed - but not too casual"	RANK 4
"Dressed too casually for an interview"	RANK 2
"Too casually dressed for an interview"	RANK 3
"Too casually dressed - but she was in the slacks and shirt which teachers wear now"	RANK 2
"Dress and mannerisms very casual"	RANK 3
"Definite language barrier, poor articulation"	RANK 1
"Dress was casual, almost too much so"	RANK 5
"Her English was hard to understand"	RANK 2

RANK 1 = least likely to be hired

RANK 5 = most likely to be hired